

# STUDY ON FUTURE EMPLOYMENT OPPORTUNITY AND LUCRATIVE PROFESSIONS IN VIEW OF TECHNOLOGICAL INNOVATION

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**Abstract:** Unlike traditional education, which generally aims to impart knowledge and allow the graduate pursue whatever they can think of with it, technical education is primarily focused with training a person for a certain job. Therefore, it makes sense that students attending technical schools receive far more, and more focused, job guidance. Furthermore, a lot of higher-level technical institutions have strong ties to businesses and other institutions who often hire their graduates for their technical divisions. Today, technical school graduates frequently find themselves in a stronger career position than graduates of conventional universities and colleges. In general, technical institutions and colleges play a far more significant role in the professional growth and career development of their alumni. The significance of schools and universities generating such individuals will only grow as the world requires more and more technical specialists who can do certain occupations. The nation must prepare the next generation to meet the growing demand for digital and smart capabilities. The future employment market will be dominated by such soft and smart technologies like communication, teamwork, problem solving, self-management, AI, ML, IoT, big data, etc. Future employment opportunities will also require other abilities that have not yet been identified. It is an analytical paper that assesses current and potential career opportunities for the new generation in light of technological advancement.

**Key words:** ICT, AI, ML, AR, VR, Genomics, data analyst, Cyber security, etc

## **Introduction**

Learning systems must guide students toward developing the necessary hard and soft skills and put them on a road toward lifelong learning. In the Program for International Student Assessment (PISA) study, almost nine out of ten students responded that they believed school had taught them skills that might be beneficial in the workplace, and three out of four claimed that school had helped them prepare for adulthood. However, PISA data also reveals that, on average, 1 in 5 pupils in Organization for Economic Co-operation and Development (OECD) nations do not possess the fundamental skills required for success in arithmetic, reading, and science. However, around 25% of students anticipate starting a job right after high school. To ensure that everyone graduates from school with solid skills and can transition into the workforce and adulthood without any difficulty, learning systems must catch up. Schools must play a crucial role. Although a quarter of school administrators claim that their institutions don't have enough digital technology for teaching, OECD data reveal that access to digital technology in schools is high. The usage of computers, laptops, and tablets in schools is also not common and has even decreased in several countries, despite the fact that students use personal devices frequently at school, largely for social reasons. Teachers claim they do not have the knowledge or access to training necessary to properly utilize the digital resources at their disposal.

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In the past, formal education was mostly related to the humanities or to disciplines like language, geography, history, political science, law, literature, finance, business, management, basic engineering, basic science, medicine, and mathematics, among others. Typically, an educated individual was seen working solely on their intellect while seated at an office. As opposed to this, technical education involves actual physical labor as well as the practical application of acquired skills and know-how. A trained labor force is literally necessary for modern society to function. The socioeconomic environment of the world is always changing. The value of technical education is always increasing.<sup>1</sup> Today, it is clearly understood by both educational institutions and students. Technical talents come in many different forms, thus even though someone may currently believe that they have little to do with their future employment, this may change as time goes on. He or she is never sure when they will be needed. There is too much competition in many disciplines that have historically been linked to high-quality traditional education, such as the humanities, law, medicine, business, and economics.<sup>2</sup> Young workers and students today might find their new technical skills to be very helpful as they search for jobs in their respective fields, and who knows, maybe they might even serve as the basis of a successful career or company initiative.

Even over the last few decades, the work market has undergone remarkable development. Nowadays, technical education encourages independence and production. Technical education students gain more than simply the experiences they gained from doing their schoolwork when they develop skills. Technical instructors give their students real-world applications for their knowledge, demonstrate how they can change the world for the better, and help them become more independent and proactive. A person with some form of technical education not only develops into a valuable asset for a business that might require an expert in this sector, but also gains enough leverage to pursue entrepreneurship. Knowledge and skills relating to technology are essential today. We must ascertain a nation's level of success. How well-off is its society? How quickly is its economic development and general quality of life improving? The higher the community's industrial output, the more likely it is for corporations to invest in the city or nation in question, and the more experienced, knowledgeable technical professionals there are in the community. Students that pursue technical education not only enrich their own lives, but also believe in a brighter future for their entire community. Finding a career that will provide both personal fulfillment and financial security can be daunting for high school and early college students. However, young people today also have access to technology, which presents a tremendous opportunity to explore new professions and work roles. They have come to the right place if they want to learn which vocations will position them for long-term success on the personal and professional fronts. These are the top jobs of the future because they are financially secure, technology-driven, and in high demand.

Actually, today's technical school graduates frequently find themselves in a better career situation than traditional university and college graduates. Many former students of traditional educational institutions find themselves sadly unprepared to the demands of real-world job searches after finishing their last assignments and submitting their final paper. They frequently lack true practical skills, which develop during years of actual work in their preferred sector, and for the time being, they are unable to find employment while carrying a heavy student debt. On the other hand, graduates from technical institutions or colleges are able to enter the workforce right away and begin advancing their careers. Technical education focuses on real-world practical skills, whether students take it in-person, online, via a website, or both. They will need every skill they acquire in technical or vocational education for their upcoming employment. A traditional university student might have to take a lot of classes that have little to nothing to do with their eventual field of study. It can be required for him or her to purchase assignments from writing services.<sup>3</sup> Today, attending a vocational school doesn't need pupils to make any purchases. Due to the typically small class sizes in technical schools, they also have a better chance to learn directly from professors.

The International Labour Organization (ILO) reports that during the epidemic, employment grew most quickly in the ICT and smart industries. As the digitization and smart world speed in every industry and service area, there will be an increasing demand for people with skills in IoT, AI, and ML. While economic changes, automation, and the digital age may result in the loss of many current jobs, the digital and smart technology industries will also see the creation of new positions. Digital and smart abilities, from beginner to expert level, will be necessary for future occupations. The new platforms, tools, and services that have proliferated since early 2020 will continue to be a part of the post-pandemic world's new normal. Inevitably, more sophisticated digital and smart skills, knowledge, and capabilities will be needed in the fields, industries, and vocations where digitization and smart technology encourages employment creation. A similar change is generating enormous investment opportunities in education and training. In order to meet the need with long-term goal setting, the education, training, and learning sectors must develop in light of new technology.<sup>4</sup> This analytical essay assesses current and potential employment for the younger generation in light of technological advancement. This essay will offer a comprehensive list of potential career paths and job openings for the present and the future.

### **Technology in Production and Industrial Sectors**

In the present, technology may play a key role in addressing the issues of poor productivity that have hampered growth in previous decades and contributed to the rise of new production paradigms like dispersed manufacturing.<sup>5</sup> However, developments in robots and automation have raised worries about the nature of labor in the future. Production is also anticipated to play a key role in addressing the most pressing environmental issues of our time, whether through more effective use of raw materials, the adoption of more ethical mining techniques, or the promotion of changes in trade geography so that production takes place closer to the final consumer. Leaders in industry, government, and civil society need to investigate these and other important challenges in the production ecosystem. Emerging and cutting-edge technologies like artificial intelligence (AI), the internet of things (IoT), next-generation robotics, and wearable 3D printing are all influencing how goods are produced. The ability of technologies to work together, mix, and connect, however, is further defining production systems. This confluence extends to other rapidly developing technological fields, such as genetic engineering, nanotechnology, advanced materials, biotechnology, and others. This expands the future and creates opportunities of enormous potential.

The World Economic Forum is concentrating on tracking these new approaches and capabilities through its initiative on Shaping the Future of Production, in collaboration with businesses across the production landscape as well as with policy-makers and civil society, in order to develop production systems that function for the benefit of all. Today, start-up businesses are among the most important sources of cutting-edge innovation because they make it possible for compelling new capabilities to open up new production possibilities. The ability of entrepreneurs and large corporations to collaborate on innovation is a crucial component of the dynamic required to achieve the benefits of technology and innovation in production. Larger businesses now benefit from economies of scale and what that means for distribution operations. For instance, in a business environment that demands dynamism and the readiness to adopt novel concepts, the scale of incumbents may make them slow-moving. The worldwide network of technology pioneers at the World Economic Forum offers a venue for leading businesses engaged in the creation, development, and use of novel technologies and breakthroughs. The community of Technology Pioneers is incredibly innovative and diverse, working in many different industries, and chosen based on a variety of factors, including the ability to have a significant and lasting impact on business and society.<sup>6</sup> Several businesses whose inventions and product offerings are of substantial relevance to the megatrends driving production

will be included in our work among the new and exciting cohort or group of numerous technological pioneers. Many of these businesses serve as excellent examples of the synergistic affect that developing technology may have on production systems.

AI and the Internet of Things are omnipresent technologies that have already had an impact on production. Aclima builds and deploys real-time environmental sensor networks infused with AI, while KONUX is developing smart sensor systems and AI-based analytics for the industrial internet of things (IIoT). Citrine Informatics uses AI to predict the behavior of chemicals under any scenario.

A lot of research is being done on autonomous vehicles. For Internet of Things (IoT) and autonomous navigation applications, Chronocam (Semiconductor Manufacturing, AI and Neuromorphic Engineering Company located in Paris) develops computer vision systems like biological eye. Beijing Horizon Robotics is creating a computer infrastructure to support AI computation, vision, cognition, and real-time decision-making on smart devices. This infrastructure will also include software to improve the safety of self-driving cars on the road. Few businesses create software for autonomous vehicles with the intention of developing the best commercial mobility-on-demand service in the world.

Predictive analytics and big data are expanding fields of study that are essential for aiding decision-making in the changing production system landscape. The significant cyber security concerns are addressed by Deep Instinct and Cymmetria (American Cybersecurity Company at the forefront of deception technology located in California). Deep learning-based cyber security (Deep Instinct) or the creation of cyber-deception tools (Cymmetria) may be able to limit an attacker's network activity. A low-cost, office-friendly metal 3D printing system is being developed by Desktop Metal to broaden the application of 3D printing, and Zymergen (American Biotechnology Company located in California) is using robotics and machine learning to better control microbes to show how production is forging ahead and embracing industries like biotechnology. Predictive analytics and big data are expanding fields of study that are essential for aiding decision-making in the changing production system landscape. The significant cyber security concerns are addressed by Deep Instinct and Cymmetria application.

### **Advantage of Technology in Education and Career Development**

Technology has improved learning accessibility in at least a few ways. The first is that access to education is no longer limited to those who have the time to attend in-person classes. Utilizing devices like laptops, smartphones, tablets, and even mobile phones, users may attend classes and study for exams whenever and wherever they choose. Furthermore, mobile media alternatives give students the freedom to select the format (video, eBooks, interactive tests, report preparation, exam, etc.) that best suits their learning preferences.<sup>7</sup> Finally, there are numerous potential for collaboration using online and mobile learning alternatives.<sup>8</sup> As they advance their academic understanding and professional competencies, learners have the chance to interact with individuals from all around the world. In a time when the importance of national borders in conducting business has diminished, collaborative learning is crucial. Peer-to-peer learning and group learning are both forms of collaborative learning. Peer learning, often known as peer instruction, is a form of cooperative learning in which students exchange ideas or solve issues in pairs or small groups. Education experts have discovered that through peer instruction, students teach one other by addressing misunderstandings and dispelling preconceptions, which is similar to the premise that two or three heads are better than one.<sup>9</sup>

Instant feedback on what the user has learnt is provided through mobile learning applications like those made by Pocket Prep (American Mobile Application Innovation Company is located in **Seattle**).<sup>10</sup> The learner can monitor their development and maintain

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motivation as they become more adept. Students are held responsible thanks to the same characteristic. The user cannot escape the truth of underperformance because their work is automatically rated and documented. For someone who would need to concentrate more on studying in order to receive greater assistance, this can act as a reality check. In fact, computer programs and mobile applications are quite effective at identifying the areas where a learner is struggling and requires help. The costs associated with producing print textbooks, exam study guides, and other tangible learning resources are passed on to students. The same is true for classroom instruction in a conventional setting. While traditional books and classes have their place,<sup>11</sup> modern technologies have reduced the cost of getting the knowledge or test prep<sup>12</sup> that students need. This not only greatly increases access to educational opportunities but also levels the playing field for students from various socioeconomic backgrounds.<sup>13</sup> Today, eBooks are gaining popularity all over the world.<sup>14</sup> Electronic bookmarks<sup>15</sup> also opened a new dimension for e-book where the reader can annotate the pages as well.<sup>16</sup>

Adults used to frequently work nine to five jobs five days each week. However, in the new economy, people frequently find themselves working on the weekends and in the nights. 92% of the 850+ knowledge professionals we surveyed most recently indicate they often work late into the night and on the weekends.<sup>17</sup> This makes it challenging to attend classes that have set meeting times. The development of mobile learning choices has made asynchronous learning a reality. Until recently, only experts in the disciplines of education, corporate learning and development, and instructional design would frequently use the term "asynchronous learning." When working individuals have a few additional minutes at lunch or during a break, they can sneak in some study time using apps for smartphones and tablets, for instance. Asynchronous learning has gained popularity, nevertheless, as a result of significant advances to teaching and learning over the past few years.<sup>18</sup> The COVID-19 pandemic compelled more than a billion students worldwide to pursue their education online in 2020. Teachers went above and above to modify lesson plans made for in-person instruction to fit an online learning setting. Higher education is undergoing a wave of change. The COVID-19 pandemic and a significant shift to online instruction have accelerated issues that the higher education industry has faced for years.<sup>19</sup>

Before the internet became widely used, publishing educational content required a time-consuming process. Changes after publishing would involve a lot of work because the content would need to be republished. The republication procedure was expensive in terms of both time and money.<sup>20</sup> Newer technologies enable content creators to quickly update apps, eBooks, and online content to ensure that the information is correct and current.<sup>21</sup> This ensures that students are receiving the most up-to-date, accurate training and information possible. Exam achievement and work performance are both correlated with having a firm grasp of the relevant industry knowledge. The only thing that could prevent technology from having a positive impact on learning is a lack of knowledge about these new learning possibilities and how they operate. It is crucial that administrators and educators gain greater knowledge about the options available so they may incorporate them into counseling sessions for current and prospective students as well as educational programs. Children should be taught the value of guidance and counseling and how it might influence their future course. Children can achieve their full potential with the help of their schools. Although good behavior is desired, sometimes young minds require guidance to develop their personalities. Children receive guidance through counseling on how to handle and resolve emotional conflict and personal issues.<sup>22</sup> Similarly, in order to adopt new technologies into the working culture, HR departments and professional development teams need to stay on top of them.<sup>23</sup>

## **Requirement of Digital and Smart Skill for Future Employment**

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Businesses in all sectors that want to build their brands, provide excellent social customer care, generate leads, and boost sales need to have employees with strong digital capabilities. "A range of abilities to use digital devices, communication applications, and networks to access and manage information," is how UNESCO defines digital skills. In order to engage in productive and creative self-fulfillment in life, study, job, and social activities, they enable people to create and share digital information, communicate and collaborate, and solve problems. Students who acquire digital skills not only increase their employability but also future-proof their careers by becoming familiar with important digital platforms.<sup>24</sup> Today's students and workers can enhance their daily lives and careers by developing their digital abilities. Learning the fundamentals of technology is the first step to learning a ton of other new things. They can help students feel more comfortable using technology for employment, school, and daily life. Today, a lot of professions require digital abilities. Even for occupations that do not demand a high level of expertise or qualifications, students and employees nevertheless require them.<sup>25</sup> For instance, if students or employees operate in a store or warehouse, you might preserve digital stock records. Every day, students and workers alike require digital skills for tasks like banking, shopping, and staying in touch with loved ones. It can help students and employees succeed by assisting with interview preparation. Most jobs are now posted online. They can submit a CV by email or an online application form. Online tests or a video interview are now included in the manual job selection procedure. If students or employees feel comfortable utilizing the most fundamental digital tools, they may continue to study more specialized skills like website coding, social media marketing, cyber security, and producing digital goods and services. As a result, individuals could discover new employment prospects and improve their performance in their existing position.<sup>26</sup>

Any young person or student who is beginning their professional career likely has dozens of unresolved questions on their mind and is aware of how traditional employment can alter dramatically over time. He or she may be concerned about attending college or making investments in a different, more enjoyable career. Or perhaps he or she already has a career but is interested in learning about changes in the labor market. There are many alternatives, but it's important to keep an eye on the occupations that will be in demand in the future. The elements you need to start taking into account for the ideal jobs for you in the future are flexibility, demand, security, and growth potential. It doesn't imply that you should disregard your hobbies, objectives, and experience (both professional and academic) when choosing the finest future vocations.<sup>27</sup> The fact that pupils are learning about the conceivably finest employment prospects in the future is fantastic. They will be better able to choose a profession. Students should think about the most in-demand careers for stability and security, or they risk being at a disadvantage later in life. We are aware that the logic of the job market will always be in line with advances in science, technology, and global demand. The current discoveries, inventions, and improvements in the field of technology are referred to as trends.<sup>28</sup> These trends frequently influence the course of enterprises, industries, and society at large, affecting how we communicate, function, and live. One can embrace new tools, enhance procedures, and take advantage of growth prospects by being knowledgeable about evolving technology.<sup>29</sup> The following technological trends will be the most significant in 2023: AI, ML, Blockchain, 5G, IoT, quantum computing, VR/AR, and cybersecurity. Below are some of the top careers and sectors for the future, which anyone can find. The majority of these positions are already in existence today, but they are expected to continue to be useful for many more years.

Our professional life are currently undergoing significant change as a result of megatrends like globalization, digitization, and others. The OECD intends to support stakeholders and governments in creating a more inclusive workplace. By doing this, we encourage advancement in the direction of SDGs 4 and 8, which deal with universal access to high-quality education, opportunities for lifelong learning, and good jobs. We offer knowledgeable counsel to decision-makers, work to elevate many viewpoints and ideas in the public discourse, and establish forums for cross-sector dialogue and cooperation. We can create a better workplace together. Some abilities



are becoming outdated as technology develops while the demand for others is growing. Although such changes result in the creation of new jobs, automation also eliminates the necessity for human input in some lower-skilled occupations. As a result, some people run the risk of falling behind, especially low- and semi-skilled workers who carry out repetitive duties that can be automated. In the OECD, about 1 in 2 workers will probably be impacted in some manner, with close to 14% of employment falling into this category and another 32% having a high probability of being at least partially automated. Since a decade ago, jobs and how people perform them have changed. It's interesting to note that numerous industries have adopted robot suits, and employees have had to learn how to use them. It may surprise you to learn that 60% of workers in OECD nations lack the rudiments of computer literacy, with 40% of their jobs being in highly digitalized industries. Again, at the same time, workers in the business are utilizing new technologies to complete their tasks more quickly, locating employment through online job boards, and working in novel ways with coworkers around the world.<sup>30</sup> The situation in LDCs and emerging nations, on the other hand, is more difficult and aggravating. It is a fact that we might work more flexibly to better balance our job and personal lives or change careers later in life. We must make sure that individuals can adapt to these technological changes successfully and that they receive the full benefits that new technologies provide. Therefore, we should assist the general public, or people everywhere, in acquiring the necessary skills for new jobs, as well as learning how to use advanced technologies.

We will need to adjust not only what we study in primary school but also what and how we learn in secondary school if we want to keep up. More students than ever before in the OECD hold a higher degree today: 45% in 2018 compared to 35% in 2008. Even so, persons with degrees are more likely to be employed than those without. However, many firms claim they are unable to locate personnel with the necessary abilities. In order to appropriately prepare pupils for the job market, further education is also required. Is higher education displacing other routes to skills provided by professional and vocational programs? What is effective? What should be done? What else needs to be done to make sure that skill acquisition and labor market needs are well matched? We must be ready to keep learning throughout our life as the needs change. Building programs to train individuals for the future of employment is well underway in several nations. For instance, France provides employees with the ability to take portable and transferrable paid training leave between firms. Finland based its predicted regional labor market needs on which training programs are most in-demand. Spain is leading an effort for SMEs to create apprenticeship programs and link existing vocational credentials with companies' skill requirements. Sector Skills Councils play a significant coordination role in Canada and the Czech Republic, while autonomous organizations like national skills advisory committees assist in improving coordination in Denmark, Finland, and Germany. Only 2 out of every 5 persons overall high skilled workers participate in education and training each year.<sup>31</sup> To guarantee that everyone's skill needs are identified and satisfied, however, there is still much work to be done. Significant investment is required to retrain workers at danger of being displaced by automation. School systems must provide kids with the tools they need to study throughout their lives and must improve the resources and training available to teachers. To overcome inequities, training should be directed at those who need it the most.

The Bureau of Labor Statistics' Occupational Outlook Handbook (OOH) is a useful resource for identifying the top career options. It offers thorough details on hundreds of professions, outlining both the work itself and typical workplaces.<sup>32</sup> The best employment of the past may not be the best jobs of the present. For instance, American industry reached its peak 50 to 75 years ago. The middle class<sup>33</sup> was accessible to employees with less education thanks to high-paying factory positions. Outside of a few high-tech areas, however, most of those employment have already disappeared. More job vacancies in industries like high tech, engineering, AI, ML, data science, health care, personal care, food service, and advanced technology are expected in the 2020s. While the economy

as a whole is expected to increase by 7% between 2023 and 2033, the OOH forecasts that the vast majority of these fields will expand by more than 10% during that time. However, knowing more about each industry and its objectives may aid students or employees in figuring out where they'd fit in well. Consider which objectives appeal to them the most.<sup>34</sup> Once again, a typical career coach is equipped to assist clients with their resumes, interviews, and job searches. They lack the training to assist them in choosing the ideal career.

### **Career Options for Youth and Students in 21<sup>st</sup> Century**

The evolution of industrial systems in the future will be built on a foundation of sustainability. Today's technology is developing quickly, enabling quicker change and advancement and accelerating the rate of change. Technology trends and new technologies are developing, but a lot more has changed this year as a result of the COVID-19 epidemic, which made engineers in general and IT professionals in particular recognize that their roles would alter in the contactless world of the future. With improvements in machine learning and natural language processing, artificial intelligence will be more common in 2023. Using this technique, artificial intelligence will be able to comprehend us better and carry out more difficult tasks. According to predictions, 5G and smart technologies will change how we live and work in the future. Therefore, students, teachers, and employees should keep up with the newest technological advances. They should keep an eye on the future to understand what abilities they will need in the future to get a secure job or career and even learn how to get there."<sup>35</sup> Computing Power, Smarter Devices, Datafication or coding, Artificial Intelligence (AI) and Machine Learning (ML), Augmented Reality, Virtual Reality (VR), Extended Reality (ER), Digital Trust, 3D Printing, Genomics, New Energy Solutions, Robotic Process Automation (RPA), Edge Computing, Quantum Computing, Blockchain, Internet of Things (IoT), 5G, Cyber Security, etc. are new technology trends that will emerge in the near future.<sup>36</sup> As we know that, the future is uncertain, and students will never be able to predict its course. However, students can prepare for it and avoid choosing a professional path that won't be competitive in the job market in the future. Making the appropriate job choice is always crucial. Today's shifting industry trends render certain employment outdated while increasing the value of others. The factors that new generation or young people and students need to start taking into account for the best professions for the future for them are flexibility, demand, security, and growth potential. When choosing the best future vocations, it does not imply that people give up their interests, ambitions, experience, talent, and educational and professional potential.

### **Social Media.**

According to a recent research, today there are 4.2 billion active social media users globally. Out of them 4.15 billion of them use mobile devices actively. According to this data, the number of social media users worldwide increased by 13.2% in just one year and is showing no signs of slowing down. So, it will be more lucrative profession in future. Every professional should be able to comprehend and use social media successfully because it is a fundamental and valuable skill. The goal of social media marketing is to comprehend the dynamic relationship between businesses, influencers, and customers rather than just tweeting or updating Facebook. Due to the prevalence of consumers using social media to post questions or comments, it now also plays a crucial part in providing excellent customer service. For graduates to gain meaningful and practical skills, social media influencers should be aware of the nuances of each platform, from YouTube to TikTok marketing, and how to enhance community participation.

**Search Engine Marketing (SEM).** Today one of the most important disciplines on which marketers have come to rely is search engine marketing (SEM). For example, let's consider that today's global 81% of internet users conduct an online search before making a purchase, with 70% of that traffic coming from Google. Students with SEM knowledge can primarily use paid advertising to boost a company's website's visibility on a search engine like as Google or Bing. By doing this, the company will get beneficial search engine



traffic to its website. Students and employees will be able to seize priceless organic search traffic outcomes by applying SEM. To achieve the highest possible conversion rates, marketers, content managers, and webmasters devote a lot of work to optimizing websites, especially for mobile and ad campaigns. The majority of businesses compete online to attract customers by overtaking their rivals in the sales of goods and services. The amount of clients making purchases online during the COVID 19 outbreak caused an increase in e-commerce transactions. Statista reports that about 22 billion people visited retail websites in June 2020. Interesting Plus, this online activity doesn't seem to be slowing down after Covid.<sup>37</sup> As a result, employers will value job searchers with search marketing experience highly.

#### **Data Analytics and Analyst.**

Although analytics and analysis are more alike than dissimilar, they both pertain to the analysis of data. However, although analytics refers specifically to the methodical analysis of data, analysis is a larger and more generic notion. Instead of leveraging data-driven precision marketing during COVID-19, many marketers turned to mass communications to reach their target audience. This was a bad choice. One consumer goods company anticipated that as individuals came out of lockdown, demand for beauty items would rise, according to McKinsey. They targeted their media expenditure based on re-openings and data utilization, which resulted in a double-digit boost in sales. When properly analyzed, data may give students a wealth of knowledge that, when applied in marketing initiatives, can increase conversions, sales, and revenue. A pioneer in management education, Peter Drucker, once remarked, "If you can't measure it, you can't manage it." Students can essentially make informed decisions using data analytics to improve company understanding. Numbers determine if and to what extent a campaign was successful. The secret is knowing what information to gather and gauge in order to enhance future campaigns. Businesses don't want to waste money on marketing based on fads or instincts. It's about increasing the impact of each campaign and maximizing the ROI.

Data scientists use data to examine the data and provide solutions. An analyst is a specialist who has the knowledge to explain the facts to anyone. Making complex data and its insights understandable for a general audience is the duty of a data analyst. If a kid excels in math and statistics, this is a great field for them. In addition to those disciplines, this position necessitates knowledge of several programming languages. A relatively new discipline, data science is currently one of the most in-demand industries. A career that is future-proof can be had by entering this sector. He will need to use data as a data analyst to find solutions to challenging business issues. The statement that data drives contemporary civilization is not exaggerated. Two and a half quintillion bytes of data are produced by humanity every day, a staggering amount that doesn't appear to be decreasing anytime soon.<sup>38</sup> International Data Corporation (IDC) recently released a report claiming that the market for big data and business analytics has been growing rapidly over the past few years, increasing from US\$122 billion in global revenue in 2015 to US\$189 billion in 2019 and on its way to a predicted US\$274 billion for 2022.<sup>39</sup>

#### **Content Marketing.**

Content is available to us in a variety of formats these days, including blog posts, videos, podcasts, infographics, ebooks, case studies, newsletters, free tools, and even social media status updates.<sup>40</sup> Although marketers usually have spent their time refining their keyword strategies; but ad campaigns, content is still remain as ruler. Because content is what drives a website or social media page, without it, clients have no means of knowing the advantages of a good or service. Content is essential for increasing brand recognition and can position influencers or brands as thought leaders. As a result, prospective hires must comprehend the significance of producing material that is not only related to keyword research but also optimized for it. Students who have expertise and knowledge in content marketing will have a useful skill that will prepare them for a career in any field.

**Email Marketing.** Nowadays email is a tried-and-true strategy that is one of the finest ways to get and keep leads. Global business leader like Elon Musk believes and uses email as command, communication and controlling tools. One of the earliest types of direct marketing, email is still remain effective in attracting new clients and keeping existing ones. A strong email marketing strategy is essential for the launch of successful campaigns, whether for small businesses or large enterprises. A seasoned digital marketer is aware that every step of the funnel needs to be properly thought out. Every stage must be optimized to draw users in and foster engagement, from the signup page and its placement on a website to the welcome email. There is an interesting fact that, usually people occasionally change their home addresses or social media accounts, but they don't frequently change their email addresses. As a result, there is a significant demand for people that understand how to engage with customers directly through email marketing. Teachers should encourage new generation and students to rethink how they may use email in their current and future careers rather than viewing it as a dated tool.

**Mobile Marketing.** According to the Digital 2021 research by We Are Social and Hootsuite, mobile connectivity is continuing to increase, with 97% of people in the world owning mobile phones and 96% of all active connections coming from smartphones. Google currently crawls pages and prioritizes content using mobile-first indexing since smartphone traffic has surpassed desktop traffic (64%), which is why. We only need to look at Google, who developed a mobile-friendly web app to evaluate the usability and speed of mobile websites, to understand the effects of this transformation. When we use mobile-friendly material, we may improve our online visibility with customers who don't have access to desktop computers. Job searchers can leverage this information by customizing their campaigns to take advantage of the most recent advancements in user experience and mobile search.

**Strategy and Planning.** In the long run, measurable results from digital marketing campaign strategies are most likely to be observed. Digital marketers need to develop and deploy campaigns based on analytics and quantitative SEO data rather than planning haphazardly. To put things in perspective, according to DMI's study paper, "Perpetual Evolution," 79% of senior marketers said that strategy and planning were "very important" to an organization's performance. Despite its significance, marketers found it to be one of the most difficult skill sets to fill. By instructing students on how to create and carry out a digital strategy, educators should take advantage of this skills gap.

**Social Selling.** Sales people need to strengthen their online skills in order to connect with and influence clients. For sellers who use it, social selling is paying off: 65% of them rely on it to fill their pipelines, and it accounts for 50% of sales in 14 main industries. Businesses are beginning to invest in new'sales stack' technologies, such as email tracking tools, productivity apps, and sales intelligence software, as they begin to recognize the value of social selling. Above all, social selling techniques are seen to be particularly successful in reaching out to contemporary buyers who rely on social media for recommendations and reviews. Any student interested in a sales career and successful social selling will benefit from training that is industry aligned because social selling is still a relatively new field for organizations.

**Pay-Per-Click Marketing (PPC).** The average landing page conversion rate, according to Larry Kim, is 2.35%, but the top 25% convert at 5.21% or higher, which is double that number. Additionally, just US\$1 is used to convert a customer for every US\$92 spent on customer acquisition. PPC is thus a well-liked strategy for brands to generate visitors swiftly. For significant traffic, businesses with large expenditures can pay to have their search result show up on Google's top page. Google's Ad-Words program is a well-

known PPC advertising model, and for the digitally savvy jobseeker, using a PPC for e-Commerce tracker is a wonderful way to monitor spends and comprehends impressions, reach, cost per click, etc.

**Video Developer.** Video has changed from being merely an entertainment medium to a key source of social media material in today's intelligent society. Nowadays, few networks like TikTok and Instagram have turned video on its head to produce wealthy influencers. Today, TikTok and Instagram have made video a strong and influential medium as well as become very popular to all type of social media user. With the average age of smartphone users rising, social media apps like WhatsApp, Weibo, and WeChat are quickly taking over as the standard methods for sending instant messages. In actuality, WhatsApp has more than 2 billion users worldwide, with American users constituting the majority of downloads. Compared to other content types like blog posts, video is simpler to absorb. Markets may access a rising market of engaged consumers by fusing the emotional impact of social media video with the reach and scope of digital advertising.

**Blockchain Developer.** Bitcoin users have recently reaped significant rewards. It is a blockchain-based crypto currency. Today, many experts predict that blockchain-based technologies will transform a variety of industries due to their distinctive potential and practical applications. As a result, those factors make pursuing a profession in this IT sector extremely advantageous for students. The need for blockchain engineers in the sector helps us to grasp their value. Recently, the demand for blockchain expertise has increased by 2000–6000%, and compensation for blockchain developers is 50–100% greater than those for conventional development professions.<sup>41</sup> Many industries, including finance, health, logistics, transport, etc., are currently looking for blockchain developers to assist them in being ready for the changing demands of the future. Blockchain is a complex topic that calls for knowledge of many different abilities, including programming and cryptography. By enrolling in a blockchain course that covers all the required subjects and the industry's top abilities, a student can become a blockchain developer. A database used to store and organize information is called a blockchain. Information in conventional databases is organized into tables' rows and columns. This makes the data simple for computers to understand. Contrarily, with blockchains, data is digitally formatted and gathered into clusters or blocks. Each block has a finite amount of storage. When that limit is reached, the block shuts and uses cryptography to link to the one before it, forming a chain. When a block links to another via cryptography, a timestamp is created that cannot be changed. The accuracy of sensitive data, such as transactions, is confirmed by this ongoing record.<sup>42</sup>

**Software Developer.** One of the most common industries in all over the world has been software development. The need for software engineers is increasing in pushbike with businesses' shift to digital platforms and reliance on digital goods. The coding and production of a software product are within the purview of software developers. To resolve any problems that may arise during software development, they must work in teams and possess good problem-solving abilities. They must refresh their abilities in accordance with how the software industry is changing in order to meet market demands. A software developer should have excellent teamwork and communication abilities in addition to their technical expertise. They ought to understand how to communicate and exchange ideas with other team members. By enrolling in a software development course and gaining the essential knowledge, students and employees can become software developers. To create new software and upgrade old programs, software developers employ their programming expertise. A job as a software developer can be a suitable fit for any student who has a creative mind and enjoys solving problems.<sup>43</sup> The future world will be AI and ML driven and software developer as profession will be more lucrative then before.

**Big Data Engineer.** The person in charge of creating, maintaining, testing, analyzing, and assessing a company's data is known as a big data engineer. Extremely massive data sets are referred to as big data. Large amounts of data are frequently gathered by businesses in the modern economy as they carry out their daily activities. Big data is always helpful for businesses to increase productivity, profitability, and scalability when used properly. Big data engineering is a well-known profession with great demand. Today, we are producing a huge amount of data during our usual work. Experts were predict that the digital world will contain 44 zettabytes, or forty times as many bytes as there are stars in our observable universe by 2020. We have already crossed the limit before. Prominent data engineers can help with that. Today, of any organization's big data needs are handled by big data engineers. The infrastructure and technologies used by the organization or company for handling data are built by big data engineers. They are in charge of gathering, processing, storing, and studying data as well as data systems. For such position, an employee or student should be skilled in arithmetic, statistics, and problem-solving techniques. In addition to these abilities, employee or students should have good deductive and communication abilities so they can readily convey their findings to non-technical audiences. To pursue a position in those industries, employees or students can earn degrees in computer science, statistics, or mathematics. Since certification guarantees that a person has all relevant skills, businesses opt for certified specialists. To enter this field, it would be ideal to attend a big data course or relevant degree or skill development program. But without a big data engineer to create systems for data collection, maintenance, and extraction, a company's big data is useless. Therefore, big data engineers are ultimately responsible for assisting businesses in managing their huge data and it's a lucrative profession in deed.<sup>44</sup>

**Cyber Security Expert.** The number of cybercrime incidents has surged worldwide by 60% in a single year 2019 alone. The threat postured by cybercriminals and organizations is increasing due to our society becoming more digital and internet connected. Now, companies and organizations from all over the world have relied on cybersecurity specialists to assist them in overcoming these challenging circumstances and situations. Student consults businesses as a cybersecurity expert to help them comprehend the potential cyber risks they might encounter. In order to defend against hackers and malware, students can also help them strengthen their cybersecurity implementations. Experts in cybersecurity assist organizations in training their workforce to adhere to best security standards. The need for cybersecurity experts is consistently growing, and if you enjoy helping people, this is unquestionably a great career for you. Students need have a degree in computer science or a related field to become cybersecurity experts. To obtain all the necessary skills in addition to earning a degree, it would be preferable if interested new generation or students enrolled in a cybersecurity course. It would make it simpler for them to land well-paying jobs in the cybersecurity industry. As a lucrative profession it will keep its demand on in future days ahead. One might select PG level cybersecurity courses to obtain the necessary understanding in the subject. The future is uncertain, and students will never be able to predict its course. However, students can prepare for it and avoid choosing a professional path that won't be competitive in the job market in the future. Making the appropriate job choice is important. Today's shifting industry trends render certain employment outdated while increasing the value of others. The Cyber Security Expert Master's Program from Simplilearn equips cybersecurity experts with fundamental, intermediate, and advanced skills that lead to industry-recognized certifications including CompTIA Security+, CEH, CISM, CISSP, and CCSP. The program starts with basic technology instruction before moving on to intermediate hacking skills like reverse engineering and network penetration testing.<sup>45</sup>

**Artificial Intelligence (AI) and Machine Learning (ML) Expert.** Experts in AI and ML are in high demand, and that need is only growing. Numerous industries, including finance, health, medicine, education, manufacturing, and production, use AI and ML.

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Roles in AI and machine learning are among the top rising careers in south Asia, according to a LinkedIn survey. Despite the rising demand for these professions, there is a severe lack of qualified and talented AI and ML specialists. The best employment opportunities for the next ten years include AI and ML. Although the AI industry is still young, competition will increase with time.<sup>46</sup> Student will need to acquire adept in programming, logic, and several computer science principles in order to become an AI or ML expert. To increase their chances of landing this position, students can enroll in a postgraduate study in artificial intelligence and machine learning. Implementations of the Digital Twin (DT) can advance smart manufacturing by fusing the physical and digital worlds. Applications of AI based on ML are widely regarded as innovative manufacturing technologies.<sup>47</sup>

#### **Virtual Reality (VR) Developer.**

A variety of businesses are using virtual reality more and more to enable users to manipulate an object even when they are physically unable to do so. It has been discovered that highly competent workers may investigate objects they otherwise wouldn't be able to thanks to the use of VR by professionals as diverse as surgeons, instructors, and architects. Virtual reality (VR) feels like a fairly good wage if we were to pick a business that will be expanding for the next few decades. According to the most recent figures, the global market for AR and VR is expected to grow to US\$296.9 billion in 2024 from US\$30.7 billion in 2021. That represents a rise of almost tenfold. In 2021, Meta (formerly Facebook<sup>48</sup>) predicts that VR and AR will have a significant impact both now and in the future. Virtual reality is going to be a turning point for the employment market and the entire society, from marketing departments to video game makers.<sup>49</sup> If young people and students are interested in learning more about this topic, they can enroll in a few introductory courses like Introduction to VR Programming, Design, and Unity.<sup>50</sup> They can take an advanced course like "Construct a Virtual Reality Experience" if they already have some VR expertise.<sup>51</sup>

#### **Augmented Reality (AR) Developer.**

As of 2022, the popular Pokémon Go game—an AR-related game<sup>52</sup>—will have generated over six billion dollars in total revenue. It was completely novel for the mobile game industry and achieved success. It was a stroke of genius to combine an iconic franchise with augmented reality. Although AR revolutionized gaming and raised the standard, it is also succeeding in other sectors, like fashion, where AR closets let you try on things at home. As AR's applications expand, there is a rising need for developers skilled in this specialized area of technology.<sup>53</sup> Students and young people can learn more about immersive creative technology like AR by enrolling in courses offered by NFTS, Royal Holloway and other many firms, like Introduction to Virtual, Augmented, and Mixed Reality.<sup>54</sup>

**Biomedical Engineering.** As a field of study, biomedical engineering is one of the best. This is in especially for individuals who are interested in finding out how modern engineering and life on Earth relate to one another. The work of biomedical engineers focuses on the integration of technology and medicine to improve human health. Artificial organs and other life-saving devices are being developed at the forefront by biomedical engineers. An excellent illustration of this is the artificial kidney. Since its inception, this has enhanced the lives of more than 2 million people.<sup>55</sup> After earning a bachelor's degree in this subject, it will be simple to acquire a full-time employment because there is a significant need for biomedical engineers. According to the BLS, this industry will grow at a pace that is 6% greater than the national average until 2030.<sup>56</sup>

#### **Biometrics.**

Biometrics is a leading career in the twenty-first century. The field of biometrics educates people on how to design tools that can identify living things. The facial recognition system is a prime illustration of this. In the coming years, biometrics and biometric readers will phase out current identifying methods. Many of the passwords that people use for their electronic gadgets will also be replaced. Smartphones, smart devices, and laptops that let users log in using their fingerprint as a password rather than

manually entering one are examples of this. Grand View Research estimates that by 2025, the biometrics industry would experience job growth of around 20%.<sup>57</sup> Organizations of all sizes working in the life sciences field place a high priority on maintaining the privacy and security of information. Touchstone Medical Imaging, a Tennessee-based company, was fined \$3 million in 2019 for exposing over 300,000 patients' protected health information online via an unprotected FTP server; this could have been prevented with the use of biometric technology.<sup>58</sup> A Business Insider research claims that by implementing biometric authentication technology on computers and tablets,<sup>59</sup> 25% of firms are avoiding scenarios like this. Biometrics graduates might work in the creation of the many biometric systems used by security services or serve as security intelligence analysts. They have access to some of the modern jobs that are increasing the fastest.

**Digital Marketer.** Today, one of the global industries with the quickest growth is digital marketing. Country like Bangladesh, it is expanding with a rate of 25% annually. Bangladesh now has 100 million internet users. Once more, as more people purchase smartphones, this figure will increase. Therefore, it's indisputably among the top employment alternatives in the coming days ahead. The fact that this sector doesn't require students to be tech-savvy is another significant benefit. Technical expertise and creativity are both required for digital marketing because it incorporates both of these elements. Digital Marketer assists students in learning marketing from actual marketers rather than academics and industry experts. Anyone may find out how to market like network with industry leaders, and obtain the tools and techniques they require to expand and take their business to new heights.<sup>60</sup> It will be more easy and lucrative profession in future further.

**Cloud Computing Expert Career.** In the technology industry, cloud computing is expanding. Presently, the platforms of three large corporations offer cloud computing capacity. Those three leaders in service delivery are Amazon, Microsoft, and Google. And they are using the platforms Amazon Web Server, Azure, and Google Cloud Platform. Growth in the industry is inevitable as more businesses come to understand the advantages of transferring their resources to the cloud. Today's cloud computing has increased security and provided businesses operational efficiency at a lower cost. You could focus on cloud architecture, administration, development, big data, networking, or security as a cloud computing expert. You must assess your aptitude and select a specialization in line with it. All of the roles are in high demand right now and will continue to be so in the future. You can explore high demand positions in the USA, UK, Canada, Australia, China, India, Japan, Germany, France, and many other countries by preparing for the sector. A computer science degree will provide you a solid foundation, but certification programs that concentrate on each aspect of cloud computing will give you an edge.

**Manager (with MBA).** Every business needs more managers to handle its operations as it grows and expands. As a result, there is always a crying need for managers to operate any organization. Management would undoubtedly be the ideal field for new generation and student who have always been interested in pursuing leadership positions. Students must earn a Master of Business Administration (MBA) degree in order to pursue a career in management. It is a postgraduate degree that is earned in two years. Anybody can learn about both fundamental and sophisticated business principles, leadership, entrepreneurship, and many other related topics by enrolling in an MBA program. However, today's perspective is executive MBA or EMBA (like EMarketing, EManagement, EFinance, EHR, etc.). In accordance with these feelings, it also enables them to specialize in particular fields. Therefore, management would be a great choice for anyone seeking for a future-proof position rather than a technical profession. After earning an MBA, students can work in a variety of areas, including banking, finance, investing, software, healthcare, etc. In the business world, a master's in MBA is a highly desired graduate-level degree, to be more precise. Many working adults who are dedicated to their



professional and personal development are willing to invest in an MBA, and many organizations are ready and willing to invest in candidates with this degree for executive roles.<sup>61</sup>

**Creators and Advisor to Creators.** These experts are already well-liked and will continue to be so over the coming several years. They are the individuals who produce online content and are also referred to as digital influencers.<sup>62</sup> When it comes to social media, especially Instagram, a creator is an expert. The success of these individuals can be attributed to the fact that modern consumers prefer to connect with actual people over brands. However, brands are well aware of this and are looking into collaborations with internet influencers.<sup>63</sup> The careers of digital influencers are managed by a variety of companies and specialists, and as more new producers emerge, it is likely that this number will increase. In addition to assisting in securing business relationships, advisors to creators also direct and oversee career pathways.

**Online Teaching and Coaching.** Online teaching is a significant trend in future vocations. Teachers are now beginning to realize how the online classroom might help them reach more pupils.<sup>64</sup> This is a powerful tool for experts who wish to expand their knowledge-distribution business. The market for online courses is becoming more niche and widespread.<sup>65</sup> Anyone who wants to learn how to impart their special knowledge to people all around the world can consult the YouTube channel for assistance.<sup>66</sup> In contrast, a coach is a professional who supports others in moving forward in various aspects of their lives, but particularly in their professional careers. There are coaches available in a variety of fields, including business, love, emotional intelligence, weight reduction, and spirituality.<sup>67</sup> There are training programs, coaching methods, and client-assistance resources available to those who want to become coaches.<sup>68</sup>

**Community and Talents Manager.** In order to better the business and the firm's reputation with these people, this expert is in charge of interacting with consumers and the communities in which the company operates.<sup>69</sup> This job is already filled by certain businesses, and it will undoubtedly grow over the coming few years. Being the ones who create brand advocates, they play a crucial role in firms since they are responsible for shaping the corporate culture.<sup>70</sup> Talent management goes a little beyond what modern human resources departments do. To help people advance professionally, it is vital to recognize and act more assertively on their strengths and deficiencies. A talent manager not only helps professionals develop their abilities but also plays a role in hiring new staff, preserving the company's culture, and lowering turnover.<sup>71</sup>

**3D Architect and Engineer.** Because it will be feasible to project locations in 3D in the engineering, architectural, and urbanism fields, experts should focus on these fields to give their clients a more realistic experience.<sup>72</sup> People should be aware of 3D architecture models if you're an engineer or architect who needs to better visualize the design. These models can aid in each step of the design process, from the project's conceptualization to its presentation to investors. The use of 3D models has a number of benefits that architectural and engineering organizations will appreciate. The manner that 3D modeling offers precise descriptions of a project is one of its key benefits. A 3D model helps expedite the approval procedure because it is simpler for non-technical individuals to grasp. When clients don't understand why the original design can't be implemented, 3D models can assist them see the changes that must be made.<sup>73</sup> These are very promising careers with bright futures for students.

**Hospital engineer.** Hospital technology has advanced as well, and new tools are being developed for procedures, novel therapies, and the daily activities of medical workers. Because of this, hospital engineers will undoubtedly be in demand in the

future.<sup>74</sup> Their major responsibility is to gather and use all technology thought to be necessary to address any issues that may arise in hospitals. The master's degree in medical engineering examines the benefits and drawbacks of the technology employed in clinical and preclinical applications, covering the broad and interdisciplinary topic of medical engineering. Students can further specialize in Biomechanics, Health Systems, or Imaging after selecting a concentration in Computer Science, Electronics, or Physics. Medical and technological professionals have a wide range of job options.<sup>75</sup> Again, the massive heating, cooling, refrigeration, and ventilation systems in hospitals are the responsibility of hospital maintenance engineers. Boilers, air conditioning units, diesel engines, turbines, pumps, condensers, generators, and compressors are just a few of the machines they operate. They activate, control, turn off, or fix this machinery.<sup>76</sup>

**Environmental Engineer.** Due to the significant changes in the environment, this occupation will be crucial among future jobs.<sup>77</sup> An area of professional engineering that is connected to environmental science is environmental engineering. This professional's primary duty is to deal with technology and the environment. It is obvious that new environmental management techniques and solutions are required to save the environment.<sup>78</sup> In reality, environmental engineering covers a wide range of scientific disciplines, including chemistry, biology, ecology, geology, hydraulics, hydrology, microbiology, and mathematics, in order to develop solutions that will safeguard living things' wellbeing while simultaneously enhancing the environment's quality.<sup>79</sup>

**Walker/Talker.** Walker/Talkers are independent contractors hired in the modern world to spend time with elderly clients using an online platform, allowing them to listen and converse with them. Compared to traditional carers, who deal with medication and help with bathing and feeding, this is a distinct kind of occupation. By providing a variety of social media apps, Facebook, Instagram, Apple, and other companies are assisting the walkers and talkers of society.<sup>80</sup> Youth and students are misinformed if they believe that a Walker/Talker will never be a part of the future. Many elderly folks live far from their families and are socially isolated. They want and require someone to actually hear what they have to say and to listen to them. Virtual reality technology is used everyday in many programs run by the Engineering and Technology Education Department.<sup>81</sup> Students are able to comprehend the foundational abilities required to execute various jobs by using the VR technology without worrying about being hurt or damaging their equipment. Additionally, the VR systems serve as a fantastic recruitment tool for Career and College Fest as well as our trips to elementary and middle schools.<sup>82</sup>

**Specialist in Renewable or Alternative Energy.** In order to produce energy from the wind, biomass crops, agricultural waste, municipal waste, or solar energy, experts must anticipate the arrival of new technologies and always stay up to date on pertinent local, state, and federal public legislation. Successful renewable energy experts interact with organizations from the public and private sectors. They communicate with engineers, representatives of the government, large and small enterprises, and the general public. Environmental anxiety is only going to increase over the next years. Instead of that! It is likely that thinking about alternate resources that won't harm our ecosystem will become more and more vital. In the current world, there is an urgent need for energy conservation and the creation of alternative energy sources. A large number of people are switching to renewable energy sources in order to protect the environment.<sup>83</sup> There is, still a ton of space for this industry to expand.<sup>84</sup> Specialists in renewable energy evaluate research on cutting-edge technology, comprehend the environmental effects of energy production, translate their knowledge into workable business plans, and communicate via a range of channels, including public presentations. Specialists in renewable energy frequently work for engineering design companies, utilities, universities, governments, or nonprofit groups. Nowadays, they also function as independent consultants and it is a lucrative profession.<sup>85</sup> Because of this, this type of expert is crucial to our future.

**Financial Manager and e-Commerce Specialist.** In order for small and large enterprises to manage their finances and stay in the black, this professional is now and will continue to be essential. Although there is artificial intelligence that can perform mathematical operations more accurately than humans, this role also entails making judgements that computers are unable to make yet.<sup>86</sup> Once more, e-commerce is a highly mainstream business model in people's daily lives. To get customers, though, you will need to stand out in a sea of competing online virtual stores.<sup>87</sup> Future financial and commercial sectors will benefit greatly from AI. In people's daily lives, e-commerce is already a very popular business concept. To get customers, though, you will need to stand out in a sea of competing online virtual stores. Any young person or student who works in the e-commerce industry will be knowledgeable with online sales tactics and the many platforms available for conducting digital transactions or website conversions. Their duties will also include tracking daily site activity and overall performance to meet objectives including enhancing user experience, boosting website traffic and sales, and fostering brand loyalty. They'll run advertising campaigns on search engines and other websites, as well as learn about and put the newest social media marketing techniques into practice.<sup>88</sup>

**Inside Sales Representative.** Any sales professional who performs his/her sales over the phone or online is usually known as, inside sales agent. The job paradigm for an inside sales profession is fairly similar to that of outside sales.<sup>89</sup> The client now has many more options, thus businesses, particularly those in the B2B market, employ representatives who will only approach the customer after they have expressed interest in the product. Accordingly, sales will become increasingly forceful and tailored to the prospect.<sup>90</sup> Inside sales professionals can conduct business with clients in a retail setting such as a store or an office setting. They will interact mostly with walk-in clients in each setting or source sales via email, cold calling, and lead follow-up calls.<sup>91</sup> The standard educational requirement for becoming an inside sales representative is a high school diploma.<sup>92</sup> A bachelor's degree in business, sales, marketing, or another area connected to business may be required by some employers of suitable people. Although it might not be necessary, having experience in a commission-based or other sales function may assist you succeed in this profession depending on the company or industry. Knowledge of Customer Relationship Management (CRM) or CRM software like Sales-force, expertise in cold calling and completing sales, and proficiency with the Microsoft Office suite products could all be advantageous.<sup>93</sup> Although some on-the-job training might be offered, successful candidates will already have the fundamental sales training and experience needed to begin working in the position.<sup>94</sup>

**Product Manager along with Fintech Career.** As we know that, a company's products and services determine its growth and profitability. Even the top corporations launch goods that don't succeed occasionally. It has been observed that new businesses introduce products that are very successful. Product managers have a direct impact and playing a pivoting role on the new products that businesses introduce. Based on facts, corporate objectives, and a clear vision, a product manager conceptualizes new products or makes changes to current ones. Nowadays, market rivalry is ferocious, and businesses are fighting for customers' attention. Product managers demand as a lucrative profession now and will continue to be so in the future.<sup>95</sup> As a product manager, they would keep an eye on the market and be aware of the needs of their clients.<sup>96</sup> They will then draw out a blueprint for a good or service based on the analysis. A group of experts who are typically under the direction of a product manager handle all of this. Almost every industry need a product manager. Any student who wants to succeed in his or her future position as a product manager in fintech (financial technology) must study both finance and technology.<sup>97</sup> He or she may pursue product management coursework to better prepare for their next careers. A wonderful future job in the business sector will be in fintech.<sup>98</sup>

**Paid Traffic Manager.** In any firm, a hired traffic manager plays a crucial function. They are responsible for planning and overseeing paid marketing strategies, including Facebook and Google Ads.<sup>99</sup> They also do A/B tests to find areas where conversion could be improved. Paid traffic includes all of the advertising campaigns that your company funds in order to increase website traffic. There are many venues that allow you to pay for traffic, including media networks, search engines, and social media sites like Facebook and Instagram. Pay Per Click (PPC) advertising, which makes use of Google Ads (formerly known as AdWords), is the most widely used type of paid traffic. Retargeting advertisements are also rising to prominence in the realm of bought traffic.<sup>100</sup> The demand for experts in this field is expanding significantly, largely because paid media is so crucial for generating leads and new customers.<sup>101</sup> Without an expert, businesses risk suffering a great loss.

**UX Design Specialist.** A UX Designer (User Experience) is in charge of making sure that a website's or app's design provides cutting-edge and appealing solutions to fulfill the needs of the user. It is a very diverse field that incorporates ideas from business, psychology, market research, design, and technology.<sup>102</sup> UX design focuses on how actual human users interact with commonplace goods and services like websites, applications, and even coffee makers.<sup>103</sup> For marketing tactics to be effective, user experience must be taken into consideration. The user must be led through the website and encouraged to respond to the design in a way that encourages conversions.<sup>104</sup> Anyone who chooses to work in this field will find great demand in the market because of the high level of demand.

**Coding Careers or special software developer.** Coding is one of the most in-demand skills among research organizations and technology companies are quickly evolving and will increase further. Software developers are now the profession with the highest overall ranking in the poll. In a remote study of more than 500 IT workers and employers has found that 'software developers were named by 37% of respondents as the most crucial tech profession in the future.' A child coding genius can now teach coding at a school due to the rising relevance of programming, and that has led several nations to include coding in the primary school curriculum. Without a doubt, coding will open up new career opportunities in the future. However, there is an obvious gap that needs to be filled for the immediate coding market because it can take some time for those elementary school students to reach the employment market. Students with these skills can alter their careers and potentially see a 40% pay rise. Students and the younger generation must seize this chance and enter the software development industry. Try out their software development fundamentals, such as ExpertTrack,<sup>105</sup> to get started. They ought to be interested in learning and honing their Python, Java, Microsoft, and Django skills. They can do whatever they can think of or imagine with programming and their courses because there are so many various things they can do with them. Perhaps creating video games appeals to them, or perhaps developing software is more their style.

**Ethical Hacker (Job related to Cybersecurity).** Nowadays many people are doing ethical hacking among who are working in the network security industry. However, this occupation is going to increase further.<sup>106</sup> The only scenario in which ethical hackers (sometime known as white hat hackers) would lose their jobs is if the present internet were to ended up and be replaced by something else. But, that doesn't seem to be a happen soon or ever. Therefore, moral hackers are not giving up. Therefore, if young people and students are interested in a job where there is no unemployment, this could be a good fit for them. By the end of 2023, ethical hacking profession is expected to have increased by 20% as compare to the previous year.<sup>107</sup> Youth and students can enroll in a variety of courses, such as online cyber security courses or Introduction to Ethical Hacking,<sup>108</sup> if they wish to try their hand at simulating website hacking to discover where changes can be made.<sup>109</sup>

**Big data Analyst.** Big data has grown significantly over the last few years, and this trend is not set to converse.<sup>110</sup> According to research by Statista, the global big data analytics market is anticipated to expand by 30% by 2025, and is going to bring more than US\$ 68 billion.<sup>111</sup> The future leaders in the field of company development will be data analysts. Big data and the capacity to analyze vast volumes of data for the advantage of their employers have allowed them to take over the department already.<sup>112</sup> They can only accurately forecast the future and provide company leaders the information they need to make the best decisions by analyzing streams of data.<sup>113</sup> This is a career that is currently available and should provide financial security for the rest of one's life if youth and students enjoy math and translating complex information into practical judgments. If young people and students wish to get started in this field, they can take a few introductory courses like big data analytics<sup>114</sup>, marketing analytics<sup>115</sup>, and data analytics<sup>116</sup>.

**Content creator.** Over the past few years, there has unquestionably been a significant increase in content producers. A content creator is someone who develops amusing or instructive information for expression through any channel or medium. Since most content is consumed digitally and is where the money is if you want to make money from your efforts, content production is particularly relevant to digital content.<sup>117</sup> This is a rather all-encompassing phrase that includes anyone who produces content for digital platforms. However, social media influencers<sup>118</sup> are the category of content creators with the most renown. Global online content consumption increased in 2020 as a result of the pandemic, with more content being watched everyday than ever before, and the need for content providers is only expected to rise in the coming years.<sup>119</sup> The opportunities for this job path are essentially limitless, ranging from fashion bloggers to real crime vloggers. Youth and students might take a few introductory courses like Digital Marketing Content Creation<sup>120</sup>, Instagram Marketing Essentials<sup>121</sup>, and copywriting skills<sup>122</sup> if they wish to get started in this field.

**Quantum Machine Learning Analyst.** In order to improve the efficiency and effectiveness of system algorithms, a quantum machine learning analyst is tasked with doing cutting-edge research and inventing novel solutions. Machine learning could potentially benefit greatly from the quantum leap in processing capacity that quantum computing promises. Inside, kids and students can explore this amazing technology that has the potential to change the game. Quantum machine learning accelerates and improves machine learning carried out on the conventional computers that we use every day. A lot more information can be stored and processed on quantum computers than on the tablets, smartphones, and supercomputers that run a lot of today's technology.<sup>123</sup> Quantum computers are created using the frequently counterintuitive laws of quantum physics. This is due in large part to the quantum element, which will represent our next technical progress and will dramatically increase computer capabilities. It is one of the most significant careers of the future.<sup>124</sup>

**Data Protection Jobs.** The number of regulations governing data handling<sup>125</sup> and privacy<sup>126</sup> is increasing every ten years. Because it may be used by marketing teams to help them sell and by political departments to help them develop targeted campaigns, and personal data is always of great interest. But too frequently, those data is mishandled or illegally used after getting into the wrong hands. This will lead to the creation of new positions for data detectives, who are responsible for upholding data regulations, to track out how specific corporations are using data. These kinds of inquiries have already begun, as shown by the inquiry into Cambridge Analytica<sup>127</sup> and how it influenced the outcome of the 2016 U.S. presidential election and even the Brexit vote, which can be understood by viewing the Netflix documentary<sup>128</sup> on Cambridge Analytica. The main lesson is that, there will soon be an increase in the number of data detective jobs available. If young people and students are interested in learning more about this field, they should enroll in a few high-quality courses like preserving patient privacy<sup>129</sup> and data science ethics<sup>130</sup>.

### **Gene Experts/Editors.**

According to the UK government, gene and cell therapy is going to create within 2030 more than 18,000 new employments in Britain alone.<sup>131</sup> Therefore, if young people and students are interested in genomic medicine, this is a field need to take into account. Because it lets us act almost like gods, gene editing is a hotly debated subject. There is a medical purpose for it, though aside from letting we select the eye color or height of our infant. We will be able to greatly improve the quality of life for many individuals and lower the chance of developing significant health disorders with the ability to change genes and apply genetic technologies.<sup>132</sup> But there are a lot of obstacles and traps that must be avoided, and this calls for regulation. To launch the industry, gene legislators will be required, as well as medical professionals to administer the system and modify the genes. It is undeniably a big milestone for mankind, despite the fact that the subject as a whole can be delicate.<sup>133</sup> If young people and students wish to learn more about this topic, they can take a few worthwhile courses, like those on the future of genetics in medicine<sup>134</sup>, how DNA affects health<sup>135</sup>, genetics courses<sup>136</sup>, etc.

### **Innovation Manager.**

An individual with responsibility for the creation of novel goods, services, or procedures is known as an innovation manager. The IT sector's lifeblood is IT innovation. It is the motivation that pushes workers toward innovative discoveries, approaches, goods, and services. Innovation is really about original thought that adds value.<sup>137</sup> This person will be in charge of reevaluating a company's plans, whether they pertain to their core competencies or to a particular area, in order to enhance their business model. In the end, innovation and unconventional thinking are required for a business to be able to stand out in the market. The innovation manager's job is to come up with fresh ideas to stay one step ahead of the competition as more and more rivals emerge. Innovation plays an especially important role in the technology sector. Tech companies are constantly fighting against obsolescence due to the quickly evolving market. Every development, no matter how small or significant, is essential to preserving competitiveness, promoting growth, and opening up new possibilities. Global innovation rankings are frequently topped by tech behemoths like Apple<sup>138</sup>, Google<sup>139</sup>, and Amazon<sup>140</sup>, showing their unwavering dedication to pushing the envelope and venturing into uncharted waters.<sup>141</sup> A truly interdisciplinary degree program in IT Innovation will combine elements of Computer Science and Engineering (CSE), Management Information Systems (MIS), and any other field of interest to the students.<sup>142</sup>

### **Mental Health Jobs.**

To make it easier for people to seek help and use professional mental health services<sup>143</sup>, many members of society are working hard to lessen the stigma attached to mental health issues. But neither will these positions as mental health workers disappear. To help individuals get through difficult times, people will always need mental health professionals, just as they will always need doctors and nurses.<sup>144</sup> According to studies on the skills gap, there were 230% more unique job ads for mental health abilities in 2021 than there were in 2016<sup>145</sup>. The current pandemic, economic downturns, environmental concerns, and even an increase in remote work could increase demand for psychologists and mental health organizations<sup>146</sup>. There are classes available on a variety of mental health issues, such as depression, anxiety, CBT<sup>147</sup>, and supporting adolescents with complex trauma<sup>148</sup>, for youth and students who want to learn more about this subject.

### **Nurse Practitioner.**

A form of nurse with greater education and power than a registered nurse (RN) is a nurse practitioner (NP). NPs can carry out a lot of a doctor's duties without needing to be only an assistant. An NP can manage a patient's care, administer medications, and diagnose ailments, according to the American Association of Nurse Practitioners (AANP). NPs are employed in a variety of healthcare environments.<sup>149</sup> They may work in private practices, hospitals, urgent care facilities, nursing homes, and clinics. Some work for public health agencies, colleges, or institutions. A student or employee must already have their RN license in order to become an NP. That could entail obtaining an associate's or bachelor's degree in nursing.<sup>150</sup> Additionally, he



or she must finish a graduate program and obtain their national certification. According to the OOH, NPs in the U.S. made a median salary of US\$ 123,780 in 2021. The highest-paid NPs worked in hospitals, while the lowest-paid ones were employed in schools. In 2021, there were 300,000 NPs in the U.S., according to the BLS.<sup>151</sup> The AANP estimates that there are more than 325,000 NPs in the U.S., which is higher than that. According to the OOH, between 2021 and 2031, demand for NPs and other APRNs will be increased by 40% in the U.S. and globally, primarily in developed and emerging nations.

#### **Data Broker.**

For instance, while current brokers facilitate the smooth flow of commodity transactions, the broker industry will soon be shaken by the emergence of a brand-new category of broker known as the data broker. The concept is basic as data brokers will be in charge of arranging contracts between data firms and others looking to purchase data blocks. They will guarantee that the buyer receives their data and that the selling business is paid. In order to safeguard the integrity of the new data market, they also make sure that the data is not shared further. The quantity of data created online is currently estimated to be 1.145 trillion MB<sup>152</sup> every day, and it is increasing exponentially every day. Therefore, it is confirmed and we are convinced that data brokers will have stable employment for a very long time. There are several top-notch courses, including those in data science<sup>153</sup>, data visualization<sup>154</sup>, and data analytics<sup>155</sup>, etc., for young people and students who wish to learn more about dealing with data.

#### **Drone Expert/Pilot.**

Nowadays, drones have become more popular and beneficial. In fact, according to the Association for Unmanned Vehicle Systems International (AUVSI),<sup>156</sup> at least 100,000 jobs for drone pilots will be created by the year 2025.<sup>157</sup> Drones can change delivery services, check building constructions and agricultural field easily, and safely carry medical supplies. Over the next ten years, drones will continue to permeate society and become increasingly commonplace. Now, drone specialists will be required to build these devices, maintain them, and possibly the most enjoyable job of all fly them.<sup>158</sup> Young people and students can pursue careers as drone engineers or pilots, which are in high demand. The construction, design, and flight operations of big UAVs (including multi-rotor and fixed-wing UAVs) are often handled by UAV systems engineers. In contrast, drone pilots fly remotely controlled aircraft for tasks like aerial photography<sup>159</sup>, cinematography, and surveying. In the not-too-distant future, anticipate seeing more of these positions becoming broadly accessible across sectors. It is crucial to be aware of the difficulties and legal limitations associated with drone use. Important and challenging courses like 'drone safety for managers'<sup>160</sup> and 'using drones for security'<sup>161</sup> may be helpful to children and students.

#### **Entrepreneur.**

An entrepreneur is a person who starts and invests in enterprises, taking on the most of the risks and reaping the majority of the benefits.<sup>162</sup> Entrepreneurship is the practice and innovative attempt of starting a business. The entrepreneur is usually considered as an innovator, a source of fresh concepts for products, services, technologies, businesses, and operational methods.<sup>163</sup> Once more, being an entrepreneur is the ability and willingness to create, plan, organize, and manage a business initiative, together with any associated risks, in order to turn a profit.<sup>164</sup> This is typically similar to running a small business.<sup>165</sup> Entrepreneurs are frequently used to describe the persons who start these businesses. Actually, the term "entrepreneur" refers to a person or organization with the capacity to transform inventions or technology into goods and services.<sup>166</sup> We must not ignore the fact that today's society is more entrepreneurial than ever.<sup>167</sup> Nowadays an average person has a better chance to launch their own business or a tiny empire because to the internet and technical advancements.<sup>168</sup> These options to launch your own firm will only increase if more technological milestones, like those mentioned above, are achieved. There has never been a better time to become an entrepreneur and give your concept a shot to flourish if you have a business idea or desire.<sup>169</sup> Young and students can enroll in entrepreneurship classes, which

may motivate them and teach them everything from how to establish a business from scratch to how to be entrepreneurial in a variety of industries.

## Conclusion

The only certainty about the future is that it is unpredictable, according to a wise adage. But the younger generation must still make the necessary preparations at the appropriate moment. Students should begin considering their ideal future occupations while we are still adjusting to the reality of the "new normal." The evaluation of a student's abilities is the initial stage in choosing a job. They need to be aware of their strengths and true interests. Working a job they're not interested in is worthless. Children who value languages like English, for instance, might choose to become teachers or writers as careers. On the other side, people who appreciate math and science are more likely to work in the fields of technology, engineering, business, finance, or healthcare. IT, AI, ML, software, and data-related careers are in high demand now and unquestionably the finest tech careers for the future. Reports from a number of sources have emphasized the rate of increase in the field's demand and pay. The development of systems that can process information like people and make intelligent decisions involves experts in IT, AI, ML, and data. Speech recognition, natural language processing, automated stock trading, fraud detection in banking and finance, security, home automation, and many more applications across a wide range of industries have all found usage for these systems. Therefore, acquiring any advanced technical skills can undoubtedly ease the burden of becoming a sought-after professional in the future.

Any student or employee with a solid job should be able to live comfortably. They need should be able to pay all of their bills, indulge in a few modest luxuries, and save money for emergencies even when they are just starting out in their new careers. Their salary should increase as they improve in their careers so they can achieve their long-term financial objectives. These can include purchasing a home, funding a child's education, or retiring. Many careers with promising development and salary potential demand a college or university degree. Some even call for post-college education, such as a technical or medical university. That puts a lot of today's youth in an awkward situation. But even without a college or university degree, many jobs pay well. Some of them are available with just a two-year associate's degree. Some of the others include training that is not academic. Online and offline technological advancements are now essential for both our personal and professional life. In addition, jobs in the design, production, supervision, and maintenance of such technologies are quickly emerging and in high demand. In order to better prepare students for competition in these expanding professions, colleges and universities are altering their degree programs. The total of a person's professional journey is their career. Many people start a profession because they believe it will help them reach their objectives, such as gaining more education, training, and experience; taking on greater responsibility; or earning more money. But it takes time to establish a career that fits each person, and during their working lives, careers are likely to change. Eventually, if their interests, motivations, and requirements change, they can decide to switch jobs, businesses, or services. Learning as much as one can about oneself, their objectives, and the broader context of work is the main step in choosing a vocation. Help them start that process by using the list below. What does their ideal life entail, in the end? To assist them in understanding what it could take to achieve them, make a list of their long-term objectives, both personal and professional.

Making the proper professional decisions at the right moment is similar to playing a calculated and strategic game. Over one-third of the population's lives are spent at work. The work that students and young people choose now should be properly planned and need to be visionary for each individual because they are aware that they will spend a large portion of their waking hours at work. It could have been easier to choose when the alternatives for careers were more limited. But with so many accessible and available profession possibilities now, choosing and training for a career is much harder. A shift might be difficult, but it also brings new chances. The

employment market is the same. As companies or service sectors adjust to market or societal changes, new employment choices emerge. The current employment alternatives might change into new roles in the future, opening even more opportunities. It is true that today's technical school graduates frequently find themselves in a stronger career position than graduates of conventional institutions and colleges. Presently, graduates with general education degrees have less career prospects than qualified individuals with little to no vocational training. Therefore, our mindset, educational policies, and learning strategies must be developed in accordance with the current and future demands of the global labor market. Any nation's national education and skill development policies and procedures should have a clear objective, be adaptable, and be sustainable. This analytical study provides students and the younger generation with a lucrative, practical, and comprehensive list of current and future career options or employment opportunities that will undoubtedly aid them in the process of choosing a vocation.

## References

- <sup>1</sup> <https://www.mygreatlearning.com/blog/best-career-options-in-future/>, accessed on 12 Aug 2023
- <sup>2</sup> <https://www.upgrad.com/blog/best-career-options-in-future/>, accessed on 12 Aug 2023
- <sup>3</sup> <https://cwassignments.com/buy-assignment.html>, accessed on 12 Aug 2023
- <sup>4</sup> <https://www.coursera.org/articles/long-term-career-goals>, accessed on 12 Aug 2023
- <sup>5</sup> <https://www.weforum.org/agenda/2017/06/technology-pioneers-are-shaping-the-future-of-production>, accessed on 12 Aug 2023
- <sup>6</sup> <https://widgets.weforum.org/techpioneers-2017/index.html>, accessed on 12 Aug 2023
- <sup>7</sup> [https://www.researchgate.net/figure/Learning-medium-preferences-of-students\\_fig1\\_237091902](https://www.researchgate.net/figure/Learning-medium-preferences-of-students_fig1_237091902), accessed on 12 Aug 2023
- <sup>8</sup> <https://online.purdue.edu/blog/education/how-has-technology-changed-education>, accessed on 12 Aug 2023
- <sup>9</sup> <https://teaching.cornell.edu/teaching-resources/active-collaborative-learning/collaborative-learning>, accessed on 12 Aug 2023
- <sup>10</sup> <https://www.pocketprep.com/>, accessed on 12 Aug 2023
- <sup>11</sup> Gao, J.; Bai, X.; Tsai, W.; Uehara, T. (February 2014). "Mobile Application Testing: A Tutorial". *Computer*. 47 (2): 46–55. doi:10.1109/MC.2013.445. ISSN 0018-9162, accessed on 12 Aug 2023
- <sup>12</sup> <https://www.springerpub.com/exam-prep-and-study-tools.html>, accessed on 12 Aug 2023
- <sup>13</sup> Berk, E. G. (1999). *Hands-on science: Using manipulatives in the classroom*. Principal, accessed on 12 Aug 2023
- <sup>14</sup> Deboer, G. (1991). *A history of ideas in science education*. New York: Teachers College Press
- <sup>15</sup> "May World-Wide Web News" in 1993 by Tim Berners-Lee, accessed on 12 Aug 2023
- <sup>16</sup> Hamm, Steve (December 14, 1998), "Bits & Bytes: Making E-Books Easier on the Eyes", *Business Week*, archived from the original on May 2, 2012, accessed on 12 Aug 2023
- <sup>17</sup> <https://blog.rescuetime.com/work-life-balance-survey-2020-2/>, accessed on 12 Aug 2023
- <sup>18</sup> <https://www.panopto.com/blog/asynchronous-learning-explained-examples-benefits-and-more/>, accessed on 12 Aug 2023
- <sup>19</sup> <https://www.panopto.com/blog/the-future-of-higher-ed-what-we-can-learn-from-online-learning/>, accessed on 12 Aug 2023
- <sup>20</sup> Bell, Julie Davis, and Vincent Badolato. 2008. "Textbook Turmoil: Is Containing the Cost of College Textbooks a Role for State Legislatures?" *State Legislatures* February 2008, accessed on 12 Aug 2023
- <sup>21</sup> Bryson, Anne (2014), *Medieval Studies and the Computer*, City: Elsevier Science. ISBN 978-1-322-55604-8
- <sup>22</sup> <https://nalandaschool.org/importance-of-guidance-and-counselling/>, accessed on 24 Jul 2023
- <sup>23</sup> <https://elearningindustry.com/the-evolution-of-technology-development>, accessed on 24 Jul 2023
- <sup>24</sup> <https://digitalmarketinginstitute.com/blog/10-digital-skills-that-can-make-students-instantly-employable>, accessed on 13 Aug 2023
- <sup>25</sup> <https://nationalcareers.service.gov.uk/careers-advice/build-foundation-digital-skills-to-help-your-career>, accessed on 13 Aug 2023
- <sup>26</sup> [https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/pi\\_2017-05-03\\_future-of-job-skills\\_0-01/](https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/pi_2017-05-03_future-of-job-skills_0-01/), accessed on 23 Aug 2023
- <sup>27</sup> <https://www.indiatoday.in/education-today/featurephilia/story/11-degrees-in-demand-for-the-future-1889563-2021-12-24>, accessed on 22 Aug 2023
- <sup>28</sup> <https://www.upgrad.com/blog/best-career-options-in-future/>, accessed on 23 Aug 2023
- <sup>29</sup> <https://www.simplilearn.com/top-technology-trends-and-jobs-article>, accessed on 24 Aug 2023
- <sup>30</sup> <https://www.coursera.org/articles/how-to-choose-a-career>, accessed on 23 Aug 2023
- <sup>31</sup> <https://www.moneycrashers.com/great-career-fields-for-the-future/>, accessed on 23 Aug 2023
- <sup>32</sup> <https://www.bls.gov/ooh/>, accessed on 23 Aug 2023

- <sup>33</sup> <https://www.moneycrashers.com/middle-class-america-definition-income-range-jobs/>, accessed on 23 Aug 2023
- <sup>34</sup> <https://defineyourcareer.com/career-plan-blueprint/>, accessed on 23 Aug 2023
- <sup>35</sup> <https://www.simplilearn.com/top-technology-trends-and-jobs-article>, accessed on 24 Feb 2023
- <sup>36</sup> <https://www.simplilearn.com/top-technology-trends-and-jobs-article>, accessed on 23 Aug 2023
- <sup>37</sup> COVID-19 impact retail e-commerce site traffic 2020 | Statista, accessed on 03 Aug 2023
- <sup>38</sup> IBM Blog, accessed on 23 Aug 2023
- <sup>39</sup> <https://bootcamp.cvn.columbia.edu/blog/data-analyst-skills/>, accessed on 23 Aug 2023
- <sup>40</sup> <https://www.semrush.com/blog/types-of-content-marketing/>, accessed on 23 Aug 2023
- <sup>41</sup> <https://www.simplilearn.com/tutorials/blockchain-tutorial/how-to-become-a-blockchain-developer>, accessed on 23 Aug 2023
- <sup>42</sup> <https://www.coursera.org/articles/blockchain-developer>, accessed on 23 Aug 2023
- <sup>43</sup> <https://www.coursera.org/articles/software-developer>, accessed on 24 Aug 2023
- <sup>44</sup> <https://www.coursera.org/articles/big-data-engineer>, accessed on 24 Aug 2023
- <sup>45</sup> <https://www.simplilearn.com/cyber-security-expert-master-program-training-course>, accessed on 24 Aug 2023
- <sup>46</sup> <https://docs.aws.amazon.com/whitepapers/latest/aws-overview/machine-learning.html>, accessed on 24 Aug 2023
- <sup>47</sup> <https://www.tandfonline.com/doi/abs/10.1080/0951192X.2020.1747642>, accessed on 24 Aug 2023
- <sup>48</sup> What is the metaverse? - FutureLearn, accessed on 24 Aug 2023
- <sup>49</sup> Introduction to Indie Games - Online Course - FutureLearn, accessed on 24 Aug 2023
- <sup>50</sup> Introduction to VR Programming, Design, and Unity - Online Game Dev Course (futurelearn.com), accessed on 24 Aug 2023
- <sup>51</sup> How to Make a VR Experience - Online Course - FutureLearn, accessed on 24 Aug 2023
- <sup>52</sup> Pokémon Go passes \$6bn in revenue | Eurogamer.net, accessed on 23 Aug 2023
- <sup>53</sup> <https://www.britannica.com/topic/millennial>, accessed on 23 Aug 2023
- <sup>54</sup> Introduction to Virtual Reality - Online Course - FutureLearn, accessed on 23 Aug 2023
- <sup>55</sup> <https://www.collegerank.net/best-careers-for-the-future/>, accessed on 23 Aug 2023
- <sup>56</sup> <https://www.bls.gov/ooh/architecture-and-engineering/biomedical-engineers.htm>, accessed on 23 Aug 2023
- <sup>57</sup> <https://www.epmscientific.com/disciplines/biometrics#>, accessed on 23 Aug 2023
- <sup>58</sup> <https://medcitynews.com/2019/05/tennessee-based-medical-imaging-company/>, accessed on 23 Aug 2023
- <sup>59</sup> <https://www.spiceworks.com/press/releases/spiceworks-study-reveals-nearly-90-percent-businesses-will-use-biometric-authentication-technology-2020/>, accessed on 23 Aug 2023
- <sup>60</sup> <https://www.digitalmarketer.com/>, accessed on 23 Aug 2023
- <sup>61</sup> <https://www.nu.edu/blog/what-can-you-do-with-an-mba/>, accessed on 24 Aug 2023
- <sup>62</sup> <https://hotmart.com/en/blog/social-media-influencer>, accessed on 024 Aug 2023
- <sup>63</sup> <https://www.linkedin.com/pulse/creator-in-residence-hot-job-summer-2023-lia-haberman>, accessed on 24 Aug 2023
- <sup>64</sup> <https://hotmart.com/en/blog/online-teacher-teach-on-the-internet>, accessed on 23 Aug 2023
- <sup>65</sup> <https://hotmart.com/en/blog/create-online-courses>, accessed on 24 Aug 2023
- <sup>66</sup> [https://www.youtube.com/watch?app=desktop&v=\\_HaOXzC6FWo](https://www.youtube.com/watch?app=desktop&v=_HaOXzC6FWo), accessed on 24 Aug 2023
- <sup>67</sup> <https://www.upwork.com/services/online-lessons>, accessed on 24 Aug 2023
- <sup>68</sup> <https://www.fiverr.com/categories/lifestyle/life-coaching>, accessed on 24 Aug 2023
- <sup>69</sup> <https://blog.hubspot.com/marketing/great-community-management-tips>, accessed on 24 Aug 2023
- <sup>70</sup> <https://www.indeed.com/career-advice/finding-a-job/what-is-a-community-manager>, accessed on 24 Aug 2023
- <sup>71</sup> <https://www.fiverr.com/categories/online-marketing/community-management>, accessed on 06 Aug 2023
- <sup>72</sup> <https://home3ds.com/3d-architectural-models/>, accessed on 22 Aug 2023
- <sup>73</sup> <https://www.softwareadvice.com/3d-architecture/>, accessed on 22 Aug 2023
- <sup>74</sup> <https://www.indeed.com/q-hospital-engineer-jobs.html?vjk=f5fad68049d0eb3f>, accessed on 23 Aug 2023
- <sup>75</sup> <https://www.kth.se/en/studies/master/medical-engineering?>, accessed on 23 Aug 2023
- <sup>76</sup> <https://www.healthcarepathway.com/health-care-careers/hospital-maintenance-engineer/>, accessed on 23 Aug 2023
- <sup>77</sup> "Careers in Environmental Engineering and Environmental Science". American Academy of Environmental Engineers & Scientists, accessed on 23 Aug 2023
- <sup>78</sup> Angelakis, Andreas N.; Rose, Joan B. (2014). "Chapter 2: "Sanitation and wastewater technologies in Harappa/Indus valley civilization (ca. 2600-1900 BC)". Evolution of Sanitation and Wastewater Technologies through the Centuries. IWA Publishing. pp. 25–40. ISBN 9781780404851, accessed on 24 Aug 2023
- <sup>79</sup> "Architecture and Engineering Occupations". Occupational Outlook Handbook. Bureau of Labor Statistics. 20 February 2019, accessed on 24 Aug 2023
- <sup>80</sup> [https://www.instagram.com/walker\\_talker\\_/?hl=en](https://www.instagram.com/walker_talker_/?hl=en), accessed on 24 Aug 2023
- <sup>81</sup> <https://www.talkwalker.com/>, accessed on 24 Aug 2023

- <sup>82</sup> <https://www.smores.com/yqde2-the-walker-talker>, accessed on 24 Aug 2023
- <sup>83</sup> <https://www.aeecenter.org/certified-renewable-energy-professional/>, accessed on 24 Aug 2023
- <sup>84</sup> <https://cleverharvey.com/career-as-a-renewable-energy-expert/>, accessed on 24 Aug 2023
- <sup>85</sup> [https://www.purdue.edu/science/careers/what\\_can\\_i\\_do\\_with\\_a\\_major/](https://www.purdue.edu/science/careers/what_can_i_do_with_a_major/), accessed on 24 Aug 2023
- <sup>86</sup> <https://www.bls.gov/ooh/management/financial-managers.htm>, accessed on 24 Aug 2023
- <sup>87</sup> <https://www.ziprecruiter.com/e/What-Does-an-E-Commerce-Specialist-Do>, accessed on 25 Aug 2023
- <sup>88</sup> <https://www.ziprecruiter.com/e/What-Does-an-E-Commerce-Specialist-Do>, accessed on 25 Aug 2023
- <sup>89</sup> <https://www.ziprecruiter.com/career/Inside-Sales-Representative/What-Is-How-to-Become>, accessed on 24 Aug 2023
- <sup>90</sup> <https://www.upwork.com/hire/e-commerce-freelancers/>, accessed on 23 Aug 2023
- <sup>91</sup> <https://www.betterteam.com/inside-sales-representative-job-description#>, accessed on 21 Aug 2023
- <sup>92</sup> <https://www.talentlyft.com/en/resources/inside-sales-representative-job-description>, accessed on 22 Aug 2023
- <sup>93</sup> <https://www.elegantthemes.com/blog/business/best-crm-software?>, accessed on 23 Aug 2023
- <sup>94</sup> <https://www.indeed.com/jobs?>, accessed on 23 Aug 2023
- <sup>95</sup> Kimball, Ralph (1998). Economic Profit and Performance Measurement in Banking". New England Economic Review. Federal Reserve Bank of Boston, ISSN 0028-4726, accessed on 24 Aug 2023
- <sup>96</sup> <https://www.mygreatlearning.com/blog/product-owner-vs-product-manager/>, accessed on 24 Aug 2023
- <sup>97</sup> Chen, Chiu-Chin; Liao, Chia-Chun (September 15, 2021). "Research on the development of Fintech combined with AIoT". 2021 IEEE International Conference on Consumer Electronics-Taiwan (ICCE-TW). IEEE, accessed on 23 Aug 2023
- <sup>98</sup> Bank, European Investment (October 19, 2022). Finance in Africa - Navigating the financial landscape in turbulent times. European Investment Bank. ISBN 978-92-861-5382-2, accessed on 24 Aug 2023
- <sup>99</sup> <https://www.wordstream.com/facebook-vs-google>, accessed on 24 Aug 2023
- <sup>100</sup> <https://salesfunnelframework.com/paid-traffic-management/>, accessed on 25 Aug 2023
- <sup>101</sup> <https://www.digitalmarketer.com/certifications/paid-traffic-mastery/>, accessed on 25 Aug 2023
- <sup>102</sup> <https://careerfoundry.com/en/blog/ux-design/what-does-a-ux-designer-actually-do/>, accessed on 25 Aug 2023
- <sup>103</sup> <https://careerfoundry.com/en/blog/ux-design/what-is-user-experience-ux-design-everything-you-need-to-know-to-get-started/>, accessed on 25 Aug 2023
- <sup>104</sup> <https://www.upwork.com/hire/ux-designers/>, accessed on 24 Aug 2023
- <sup>105</sup> <https://futurelearn.zendesk.com/hc/en-us/articles/360018436399-What-is-an-ExpertTrack-and-how-does-it-work->, accessed on 25 Aug 2023
- <sup>106</sup> Network Security and Defence - Learn Cyber Security - FutureLearn, accessed on 25 Aug 2023
- <sup>107</sup> The Future Scope of Ethical Hacking in 2023 and beyond? (knowledgehut.com), accessed on 25 Aug 2023
- <sup>108</sup> Online Cyber Security Courses - Training & Certificates - FutureLearn, accessed on 25 Aug 2023
- <sup>109</sup> Introduction to Ethical Hacking - Online Course - FutureLearn, accessed on 25 Aug 2023
- <sup>110</sup> Big Data & Analytics Courses - Learn Online - FutureLearn, accessed on 25 Aug 2023
- <sup>111</sup> Big data - statistics & facts | Statista, accessed on 25 Aug 2023
- <sup>112</sup> Managing Change in the Global Business Environment - Online Course - FutureLearn, accessed on 05 Aug 2023
- <sup>113</sup> <https://www.futurelearn.com/courses/introtobigdata>, accessed on 25 Aug 2023
- <sup>114</sup> Online Data Analytics Courses - Training & Certificates - FutureLearn, accessed on 25 Aug 2023
- <sup>115</sup> <https://www.futurelearn.com/courses/uva-darden-marketing-analytics>, accessed on 25 Aug 2023
- <sup>116</sup> <https://www.futurelearn.com/courses/applied-big-data-analytics>, accessed on 21 Aug 2023
- <sup>117</sup> <https://www.adobe.com/express/learn/blog/content-creator>, accessed on 21 Aug 2023
- <sup>118</sup> <https://www.futurelearn.com/courses/creating-strategies-influencer-marketing>, accessed on 21 Aug 2023
- <sup>119</sup> <https://www.forbes.com/sites/johnkoetsier/2020/09/26/global-online-content-consumption-doubled-in-2020/?sh=1387a6072fde>, accessed on 21 Aug 2023
- <sup>120</sup> <https://www.futurelearn.com/experttracks/content-creation>, accessed on 21 Aug 2023
- <sup>121</sup> <https://www.futurelearn.com/experttracks/instagrammarketingexperttrack>, accessed on 21 Aug 2023
- <sup>122</sup> <https://www.futurelearn.com/courses/digital-copywriting-fundamentals>, accessed on 21 Aug 2023
- <sup>123</sup> <https://www.coursera.org/articles/quantum-machine-learning>, accessed on 23 Aug 2023
- <sup>124</sup> <https://www.discoverdatascience.org/articles/what-is-quantum-machine-learning/>, accessed on 23 Aug 2023
- <sup>125</sup> <https://www.futurelearn.com/courses/ethicsandlawindataandanalytics>, accessed on 21 Aug 2023
- <sup>126</sup> <https://www.futurelearn.com/courses/information-security-for-beginners>, accessed on 22 Aug 2023
- <sup>127</sup> <https://www.wired.com/amp-stories/cambridge-analytica-explainer/>, accessed on 23 Aug 2023
- <sup>128</sup> <https://www.netflix.com/bd/title/80117542>, accessed on 23 Aug 2023
- <sup>129</sup> <https://www.futurelearn.com/courses/protecting-health-data>, accessed on 23 Aug 2023



- <sup>130</sup> <https://www.futurelearn.com/courses/ethicsandlawindataandanalytics-sc>, accessed on 24 Aug 2023
- <sup>131</sup> <https://www.bbc.com/worklife/article/20181003-why-gene-therapy-will-create-so-many-jobs>, accessed on 23 Aug 2023
- <sup>132</sup> <https://www.futurelearn.com/courses/next-generation-sequencing>, accessed on 23 Aug 2023
- <sup>133</sup> Centers for Disease Control and Prevention (2015), "A New Tool to Diagnose Tuberculosis: The Xpert MTB/RIF Assay" (PDF), CDC website, archived from the original (PDF) on 2017-12-17, accessed on 23 Aug 2023
- <sup>134</sup> <https://www.futurelearn.com/courses/the-genomics-era>, accessed on 24 Aug 2023
- <sup>135</sup> <https://www.futurelearn.com/courses/genes-and-health-how-dna-influences-disease>, accessed on 24 Aug 2023
- <sup>136</sup> <https://www.futurelearn.com/subjects/healthcare-medicine-courses/genetics>, accessed on 25 Aug 2023
- <sup>137</sup> <https://www.techtarget.com/searchcio/definition/innovation-manager>, accessed on 24 Aug 2023
- <sup>138</sup> <https://www.techtarget.com/whatis/definition/Apple>, accessed on 24 Aug 2023
- <sup>139</sup> <https://www.youtube.com/watch?v=deDncBTgy5I>, accessed on 24 Aug 2023
- <sup>140</sup> <https://www.techtarget.com/whatis/definition/Amazon>, accessed on 24 Aug 2023
- <sup>141</sup> "The World's Most Powerful People". Forbes. December 2016. Archived from the original on January 5, 2018, accessed on 24 Aug 2023
- <sup>142</sup> <https://www.unomaha.edu/college-of-information-science-and-technology/academics/it-innovation.php>, accessed on 24 Aug 2023
- <sup>143</sup> Understanding the Impact of Stigma on Addiction Treatment - FutureLearn, accessed on 25 Aug 2023
- <sup>144</sup> MSc Mental Health - Online Degree - FutureLearn, accessed on 25 Aug 2023
- <sup>145</sup> Skills Gap Trend Report (hs-sites.com), accessed on 25 Aug 2023
- <sup>146</sup> Free Online Psychology & Mental Health Courses - FutureLearn, accessed on 25 Aug 2023
- <sup>147</sup> Understanding Anxiety, Depression and CBT - Online Cour (futurelearn.com), accessed on 25 Aug 2023
- <sup>148</sup> Teaching Students with Complex Trauma - Online Course (futurelearn.com), accessed on 25 Aug 2023
- <sup>149</sup> <https://www.allnursingschools.com/nurse-practitioner/>, accessed on 23 Aug 2023
- <sup>150</sup> <https://www.moneycrashers.com/urgent-care-vs-emergency-room/>, accessed on 23 Aug 2023
- <sup>151</sup> <https://www.bls.gov/oes/current/oes291171.htm>, accessed on 23 Aug 2023
- <sup>152</sup> How Much Data Is Created Every Day in 2023? (techjury.net), accessed on 25 Aug 2023
- <sup>153</sup> Free Data Science Courses - Learn Online with Top Universities - FutureLearn, accessed on 25 Aug 2023
- <sup>154</sup> Online Data Visualisation Courses - Training & Certificates - FutureLearn, accessed on 25 Aug 2023
- <sup>155</sup> Online Data Analytics Courses - Training & Certificates - FutureLearn, accessed on 25 Aug 2023
- <sup>156</sup> Eisenbeiss, H., 2002. WITAS UAV (Wallenberg Laboratory for Information Technology and Autonomous Systems Unmanned Area Vehicle) – Positioning of the helicopter with GPS.Linkoeping, accessed on 23 Aug 2023
- <sup>157</sup> [auvsi.org/our-impact/economic-report](https://auvsi.org/our-impact/economic-report), accessed on 25 Aug 2023
- <sup>158</sup> <https://www.mycareersfuture.gov.sg/job/engineering/uav-systems-engineer-f-drones-2a77f100db7e36d7b95cf922a34a8c01>, accessed on 25 Aug 2023
- <sup>159</sup> <https://nationalcareers.service.gov.uk/job-profiles/drone-pilot>, accessed on 23 Aug 2023
- <sup>160</sup> Drone Safety for Managers in the UK - Online Course - FutureLearn, accessed on 23 Aug 2023
- <sup>161</sup> How to Use a Drone for Security Purposes - Online Course - FutureLearn, accessed on 23 Aug 2023
- <sup>162</sup> Entrepreneur: What It Means to Be One and How to Get Started". Investopedia, accessed on 23 Aug 2023
- <sup>163</sup> Edison, H., Ali, N.B., & Torkar, R. (2014). Towards innovation measurement in the software industry. *Journal of Systems and Software* 86(5), 1390–407, accessed on 23 Aug 2023
- <sup>164</sup> Business Dictionary definitionyuugtygn". Business Dictionary. Archived from the original on 16 November 2018, accessed on 23 Aug 2023
- <sup>165</sup> Katila, Riitta; Chen, Eric L.; Piezunka, Henning (7 June 2012). "All the right moves: How entrepreneurial firms compete effectively" (PDF). *Strategic Entrepreneurship JNL*. 6 (2): 116–132, accessed on 23 Aug 2023
- <sup>166</sup> Audretsch, David B, et al, (2002). "The Economics of Science and Technology". *The Journal of Technology Transfer*. 27 (2): 157, accessed on 23 Aug 2023
- <sup>167</sup> Starting a Business 1: Vision and Opportunity - FutureLearn, accessed on 23 Aug 2023
- <sup>168</sup> Start Your Own Business - Online ExpertTrack - FutureLearn, accessed on 23 Aug 2023
- <sup>169</sup> Creating Backable Business Ventures - Online Course - FutureLearn, accessed on 23 Aug 2023

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