Observatório do Emprego

Engineering trends for 2022

Unlike what is expected for other sectors, the Engineering area provides many opportunities for professionals. Research conducted by Randast Canada shows that from 2018 to 2028, there was a growth of 11.300 mechanical engineering jobs and 18.900 civil engineering jobs are expected in the market. In addition to creating a talent pool of 13.200 potential for mechanical engineering and 26.500 for civil engineering.

Based on these results, employers in the engineering sector are in a privileged position as there is no forecast of a labor shortage in the coming years. However, employees need to consider the challenges of hiring top talent candidates as well as selecting the right candidate for the job with all the advancements in technology. To do so, it is always necessary to understand the latest trends in engineering jobs.

As trends, we may quote the need to create new disciplines which adapt to new technologies. Therefore, integrating the adoption of new technologies with current business processes brings the challenge to employers to know the necessary skills and qualifications. For this, the development of plans in the companies for the reassessment of current engineering positions and their evolution, in order to determine the necessary competences to succeed in the new engineering roles.

Another trend is the reduction in the number of young engineering graduates with an engineer's license. As reasons that may explain this reduction are the complexity in the process of obtaining a license and professional goals that do not require a license.

Although many engineering occupations do not require a professional license, many employers continue to look only for licensed engineers.

One more trend is greater diversity in engineering occupations that for decades were predominantly male-filled. Women, indigenous peoples, and minorities are underrepresented in all STEM sectors (Science, Technology, Engineering, and Mathematics). In recent years, with a boost in STEM areas, both at university and in companies, there has been an increase in diversity. By 2030, it's predicted that at least 30% of all licensed engineers will be women. However, the pandemic stopped this trend. But a new push for greater diversity and inclusion in the workplace could reverse this predisposition.
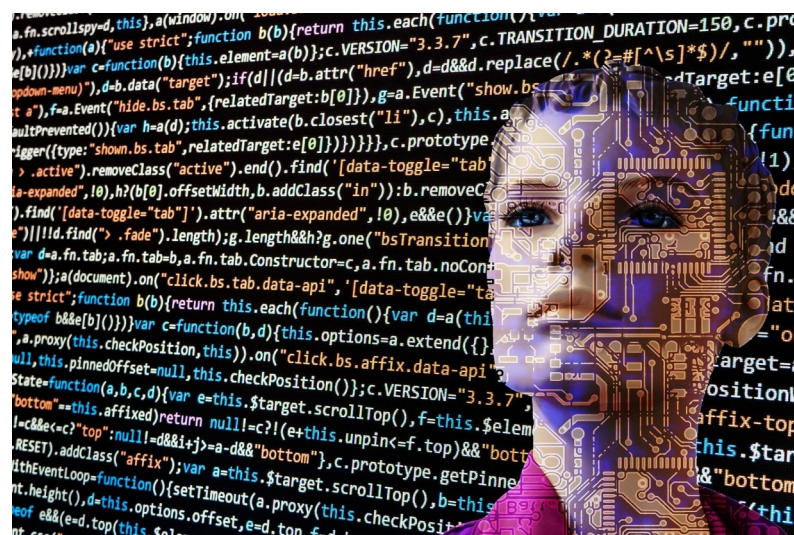

Image source: Pixabay.

RANDSTAD (2021) "quais as tendências de engenharia para 2022?". Available on: : https://www.randstad.pt/tendencias-360/mundo-do-trabalho/quais-tendencias-de-engenharia-para-2022/

A reflection regarding the news ways of work and technologies

After almost two years of the COVID pandemic, we are in a time of reflection regarding the work and the technologies adopted, which have now consolidated and become habitual.

With a growth of the number of new start-ups that follow these premises, and that obtain competitive advantages by being hybrid-remote since the beginning. However, it requires a new set of tools to manage this complexity. A survey conducted by January Enterprises in 2021, with 450 start-up states in the United States and European Union, showed that 91% of start-ups in early-stage, are integrated or distributed. The challenge of hybrid-remote work is associated with a significant number of employees working1 with their jobs, brought in 2, with a new Z generation labour market perspective.

In this context, employers are having to rethink how to attract, engage and retain talent. Employers pointed to the continuation of software automation as a way of enhancing processes such as purchasing and logistics as trends for 2022, as the technologies are better accepted and are aimed at a wider range of workers and employers.

Another trend is the need for new technologies to enable a hybrid combination of office and remote work, in order to create a sense of belonging and company culture that motivates and retains employees.

The use of real-time, dynamic human resources data infrastructure layers will tend to transform workforce development through data integration. Since most job platforms of the future need this type of infrastructure to assess current labour and workforce data, in addition to predicting short-term labour market needs

Regarding employees, the trends are towards the remodelling of talents as the "office" model becomes more flexible. In addition, employee well-being will be in the focus of companies and not just on improving employee productivity by building a strong corporate culture and creating a sense of belonging. And regular company offsite and mental health benefits will be key to retention and productivity.

Finally, another trend is that work-related software will be increasingly developed as a way to facilitate human connection and not just efficiency.

Image source: Pixabay.

Bannon, M.T. (2021). "7 Future Of Work Predictions For 2022". Forbes. Available on: https://www.forbes.com/sites/marenbannon/2021/12/08/7-future-of-work-predictions-for-2022/?sh=5b98cd435d5a

Did you know...

Despite the uncertainties arising from the pandemic, regarding the labour market and the economy, the acceleration of digital transformation through digitalization and the introduction of new technologies in the sector makes it possible to accelerate new economies. This is the case of the so-called "*Gig Economy*".

Gig economy is defined due to the use of digital platforms to connect freelancers and clients to provide short-term services or product delivery, such as delivery apps.

In spite of its growth and the economic benefits of productivity and employment, the challenge for companies is to reach a harmony between innovation and benefits for professionals, such as variability in working hours and a better balance between employees' personal and professional lives.

According to the Organization for Economic Co-operation and Development (OECD), the gig economy platforms employment rate is still low, ranging between 1% and 3% of the total employment rate. However, there is a fast evolution in this rate, as the gig economy grows. A Mastercard report indicates that, by 2023, global gig economy transactions are expected to grow by 17% per year to around €455 billion.

The gig economy is also an opportunity for students who want an income while studying, and for parents who want to combine with work into school hours, as more flexible schedules. According to the OECD, most professionals who are part of the gig economy feel satisfied, which seems to reflect voluntary choices and not the lack of other options.

For McKinsey Consulting, self-employed workers are classified into: (i) free agents - they choose self-employment, from which they derive their primary income; (ii) casual workers - use self-employment by choice for extra income; (iii) resigned - living mainly from independent work, but who would prefer traditional jobs; (iv) those in which supplementary self-employment occurs out of necessity.

In this context, freelancers and traditional professionals face the challenge of becoming more proactive in managing their careers in the face of new technologies, and for companies to adapt to the need for flexibility, attracting and retaining talent in the face of new ways of working.

Image source: Pixabay.

RANDSTAD, (2022) "o que é a gig economy". Available on: : https:// www.randstad.pt/tendencias-360/mundo-do-trabalho/o-que-e-a-gig-economy/

Women in Digital Scoreboard 2021

As part of the Digital Economy and Society Index (DESI), the Women in Digital Scoreboard assesses the performance of women in European Union Member States regarding areas as internet usage, internet user skills, specialized skills, and employment, based on 12 indicators.

The results of the Women's Scoreboard 2021 indicate the persistence of a significant gender gap in digital specialized skills. In this context, only 19% of the Information Technology and Communication (ICT) specialists and approximately 33% of science, technology, engineering, and mathematics (STEM) graduates are women. Moreover, in recent years, these numbers have remained stable, despite the goal set by the Digital Compass for the European Union, by 2030, to have 20 million ICT specialists employed, between women and men.

Regarding internet usage and internet user skills, in 2020, 85% of women used the internet regularly and 87% of men used the internet regularly. In 2019, the digital skills indicators showed that 54% of women have basic digital skills (58% for men), 29% have more than basic digital skills (33% for men), while 56% of women have at least basic software skills (60% of men).

In relation to the EU Member States, women have a higher digital level in Finland, Sweden, Denmark, Estonia, and the Netherlands, where performance on DESI is rated very good. Women in Romania, Bulgaria, Poland, Hungary, and Italy have the lowest female participation in the digital economy and society.

The 2021 Women's Digital Scoreboard shows that a significant gender gap remains in specialized digital skills, although the gap is closing in internet us.

Portugal

	Portugal Women value	Portugal Women rank	Portugal Men value	EU Women value	EU Men value
1 Use of internet					
1.1 Internet users	75%	22	78%	85%	87%
% individuals, 2020					
1.2 People who have never used the internet	20%	24	17%	10%	8%
% individuals, 2019					
1.3 Online banking	56%	22	65%	65%	67%
% internet users, 2020					
1.4 Doing an online course	18%	10	18%	15%	15%
% internet users, 2020					
1.5 Online consultations or voting	15%	7	16%	11%	12%
% internet users, 2019					
1.6 e-Government users	54%	22	60%	64%	64%
% internet users submitting forms, 2020					
1 Use of internet Score (0-100)	54	21		60	

2 Internet user skills					
2.1 At least basic digital skills	49%	19	54%	54%	58%
% individuals, 2019					
2.2 Above basic digital skills	30%	16	34%	29%	33%
% individuals, 2019					
2.3 At least basic software skills	53%	19	57%	56%	60%
% individuals, 2019					
2 Internet user skills Score (0-100)	51	19		53	
3 Specialist skills and employment					
3.1 STEM graduates	15	6	26.4	14	28
Per 1000 individuals aged 20-29, 2019					
3.2 ICT specialists	1.8%	12	6.2%	1.7%	6.5%
% total employment, 2020					
3.3 Unadjusted gender pay gap	14%	6		19%	
% difference in pay, 2019					
3 Specialist skills and employment Score (0-100)	54	7		47	

Source: https://digital-strategy.ec.europa.eu/en/news/women-digital-scoreboard-2021

To learn more about the Aveiro Labour Observatory: http://observatoriodoemprego.web.ua.pt/

To learn more about the Urban Innovative Actions: https://www.uia-initiative.eu/en/uia-cities/aveiro

To learn more about the project: https://www.aveirotechcity.pt/pt/atividades/observatorio-do-emprego

Would you like to receive more information? Register and receive the newsletters: observatoriodoemprego@ua.pt