

Observatório do Emprego



NEWSLETTER #21 August 2021

ISSN 2184-7894

Increase bet on AI and Machine Learning

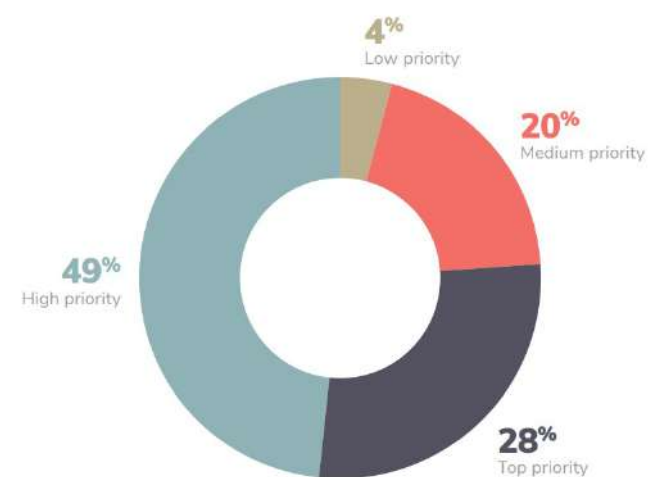
The *machine learning* concept refers to the development and implementation of algorithms which automatically create representation models of knowledge from a set of data. The growth of its adoption by companies to perform specific tasks represents a significant structural change. Machine learning is expected to enable organizations to strengthen their relationships with their customers, improve their efficiency and the decision-making processes, once allow them to expand revenue opportunities. According to the Salesforce Research 2020 report, 83% of IT leaders reported that artificial intelligence (AI) and machine learning are transforming customer engagement opportunities and their own business.

The pandemic scenario has generated an “urgency” in the implementation of AI and machine learning projects. A survey conducted by the Consulting Algorithmia in 2021 showed that 76% of companies prioritized the adoption of AI and machine learning among other technologies. Another report of 2019 from MMC Ventures indicated that one in ten companies started using ten or more AI applications, such as chatbots, process optimization models and fraud analysis.

The 2021 Algorithmia research also showed that the number of data scientists increased by 76% between 2020 and 2021. This rate reflects the fact that in 29% of the 403 interviewed organizations there were already more than 100 data scientists working routinely.

Likewise, the Burning Glass Technologies report identified that, until 2025, the demand for skills related to AI and machine learning will continue to grow at a rate of 71% per year. The increase of opportunities for these professionals reflects the success of business cases that have created new revenues, and have reduced their operating costs.

However, organizational leaders highlight the importance of transversal competences, in the digital transition. They state that it is essential to ensure that employees have a broad vision of the objectives of investments in technology in the general framework of their organization, since the acceptance and effective success of adopting new technologies depends on an effort from all levels of the organization.



Amazon Web Services (2021) *Unlocking The Future At NextRoll: How Machine Learning Is Changing Everything For Innovation-Minded Businesses*. Forbes. Accessed on: 04/07/2021
Columbus, L. (2021) *76% Of Enterprises Prioritize AI & Machine Learning In 2021 IT Budgets*. Forbes. Accessed on: 04/07/2021
Imagem: Prioridades para as iniciativas em IA e Machine Learning em relação as demais iniciativas em TI de acordo com as empresas. Source: [Algorithmia_2021_enterprise_ML_trends.pdf](#)

Digital transformation in recruitment models

The digital transformation has changed not only the production way and the corporate environment, but also the profile of employees. Digital skills and the so-called soft skills have become essential for companies in order to reinforce the “capacity to 'see beyond' or 'think outside the box'”. Moreover, improving the ability to take decisions in a context of uncertainty and ensuring the necessary leadership skills for the future, without forgetting the human component.

In this sense, companies have increased the necessity of training programs which develop technical, analytical and digital skills, as well as transversal skills or the soft skills, in order to improve collaboration, the ability to interact in multicultural contexts, autonomy, among others, in its employees.

Moreover, the discussion related to the need to transform the models for recruiting, selecting and attracting talent has drawn attention. Many organizations have been looking for highly qualified profiles in sustainability and project management fields. And at the same time, the need for skills in the area of management associated with statistics, engineering and information technologies has also increased.

Recruitment processes were also affected by restrictions due the Covid-19 pandemic. According to Forbes magazine, one of the main trends observed in 2021 is the digitization of recruitment processes. Digital tools (e.g. Zoom, etc.) have become widespread, allowing candidates to be interviewed without the need to schedule face-to-face interviews. Similarly, conditions were also created, also for some occupations, in remote locations as other countries.

Recruiters have also bet on the growth of digital strategies which combine social networks with digital platforms in order to reach more qualified individuals, but also to promote a large number of job lists, expanding their prospecting area. This is possible due to the greater capacity of these platforms to advertise vacancies and increase the interest of candidates. Another advantage is to allow the creation of more diverse, equitable and inclusive work environments, offering more opportunities to more (qualified) people and their communities.



Digital leadership skills index (e-leadership) (0-100: very low to very high)



European Union: 28 State Members (including UK)* not available| Sources: DESI 2020, Digital transformation scoreboard 2018, Work group evaluation+Liberdade para a transição digital

20 de junho de 2021

+factos

Homegardner, T. (2021) *Five Recruiting Trends I've Observed In 2021 And What They Mean For Your Job Search*. Forbes. Accessed on: 04/07/2021
Image source: <https://maisliberdade.pt/maisfactos/defice-de-competencias-digitais-em-portugal/>. Accessed on: 04/07/2021

Did you know...

A recent study developed by TechTalent Insights from HaysTalent Solutions showed that Portugal is considered an international reference for companies seeking to recruit talent in digital areas and also for companies that intend to start operations. One of the reasons is the recognized dynamics of the technological and digital market in the country.

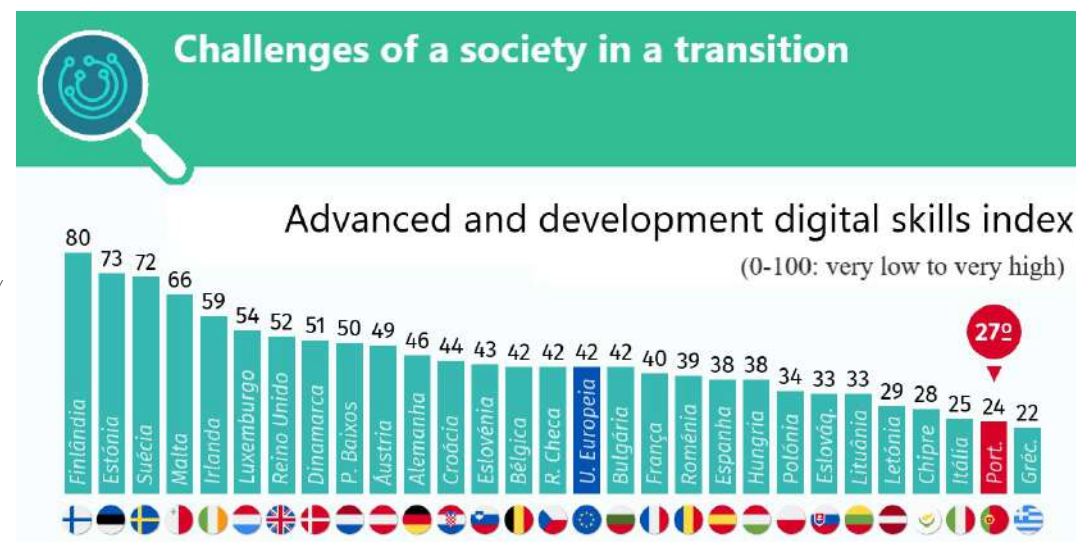
Regarding the job applicants in Portugal, recruiters point out as the essential characteristics, profiles with good technical skills, analytical skills, multinational orientation and language skills. Another aspect that caught the attention of the recruiters is the quality of higher education institutions, among which the University of Aveiro was highlighted.

For the recruiters consulted, the five most valued profiles and most required in the market are: Software Developer, DevOps, Data Scientist, Cybersecurity Specialist and Cloud Engineer. However, it was pointed out the difficulty in getting qualified professionals, in the short term, in order to respond quickly to the growing request by companies.

According to the ConquestOne, a multinational company that has just entered in Portugal, in the sector of recruiting information and communication technologies professionals, Portugal has very favourable conditions to become the European Silicon Valley, as it has the best talents (powered by the Web Summit) and by high internal and European companies request for these professionals. For the heads of the company, one of the reasons is the Portuguese appreciation for academic life, with superior courses of recognized quality. Therefore, the international market, namely the European one, is increasingly looking for professionals in Portugal, evaluated with highly valued professional excellence.

Employers emphasize that, despite the good supply of talent available in the Portuguese market, the challenge lies in attracting and retaining these professionals. The development of local strategies presents itself as one of the alternatives. The inclusion of training actions and incentives for upskilling, to meet market needs, is adopted by many companies that have started to offer internal training and improvement programs as a strategy to retain and attract professionals.

Therefore, the Aveiro Labour Observatory works, has the mission of contribute with a prospective vision of the qualification needs in the Aveiro region. To systematically provide relevant information to citizens, but also to educational and training entities, companies and other stakeholders. This information related to the required skills for digital transformation in the local labour market will increase the employment opportunities and the competitiveness of the region, for the retention and attraction of talents. In addition, the Aveiro Labour Observatory 's role is also recognized to propose qualification programs that respond to the challenges of the business fabric of the Aveiro region.



Terranova (2021) Aveiro é um dos distritos referenciados pelos gigantes das tecnologias. Acessado em 08/07/2021.
 Freire, M. (2021) Estudo revela que Portugal é referência mundial para recrutamento nas TI. Business.IT. Acessado em 09/07/2021
 Fonte da imagem: <https://maisliberdade.pt/maisfactos/defice-de-competencias-digitais-em-portugal/>. Acessado em 09/07/2021
 Fonte dos gráficos: <https://www.digitaleurope.org/resources/an-innovative-and-sustainable-europe-that-brings-benefits-to-society-at-large-and-invests-in-future-generations/> Acessado on 09/07/2021.

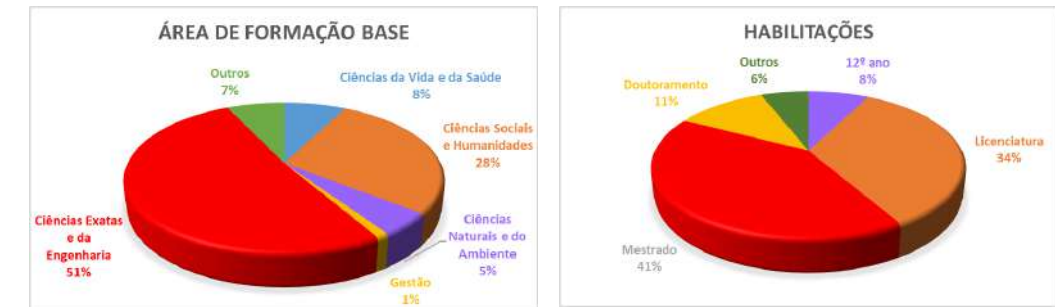
Aveiro STEAM City—Awareness workshops

On June and July of 2021, the Aveiro Labour Observatory conducted four Awareness Workshops, dedicated to presenting the four pilot programs and motivating the community to the needs for qualification and professional growth, namely in the Aveiro region. The themes of Awareness Workshops were: “From Monitoring to Optimization: sensing, analyzing and visualizing data and machine learning”; “Big Data Computing Technology to Support Industry 4.0”; “Challenges and best practices in designing and mapping processes by digital means” and; “Promotion of Products and Services in Digital Media: forms of content creation and digital dissemination”.

The workshops took place in online and face-to-face formats, in order to meet the restrictions of the pandemic context, and enabling the broad involvement of interested parties. The Awareness Workshops had a total of 184 subscribers, and the participation of 90 people in the first two events.

Per event, 117 entries were registered for "From Monitoring to Optimization: sensing, analyzing and visualizing data, and machine learning"; 122 entries for "Big Data Computing Technology as Support to Industry 4.0"; 124 entries for "Challenges and best practices in designing and mapping processes by digital means"; and finally 137 entries for "Promotion of Products and Services in Digital Media: forms of content creation and digital dissemination".

You may check a little bit more about the profile of those enrolled in Awareness Workshops in the charts below.



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



Contatos

Observatório do Emprego
 observatoriodoemprego@ua.pt
 @observatoriodoemprego

Câmara Municipal de Aveiro
 www.cm-aveiro.pt

Universidade de Aveiro
 www.ua.pt

Inovaria
 www.inovaria.pt

Main Urban Authority: AVEIRO CÂMARA MUNICIPAL, TECH CITY

Delivery Partners: altice labo, Instituto de Telecomunicações, INOVARIA, Universidade de Aveiro, CEDES

Funding: AVEIRO STEAM CITY, UIA, European Union