Observatório do Emprego

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Trends for Big data in 2021

Digital information has become a significative part of many aspects of our lives in a world that is hyperconnected. The term Big Data is generally used to describe a large amounts of unstructured information from multiple channels or even to identify a technology and practice of working with data, not only in big volume, but also fast and in different formats.

Every day there are 500 million tweets, 294 million emails, 4 million gigabytes of data on Facebook, 65 trilion messages on WhatsApp and 720,000 hours of new content on YouTube. The generation of information tends to grow, namely due the expansion of the Internet of Things. For the development of other technologies such as autonomous cars, robots and robots, not only is required a large amount of data, it is also necessary an analytical technology that allows interpreting the needed information.

Therefore, from 2021 some trends are pointed out as an influencers on how data and analysis will be used for work, leisure and other daily activities: the increase of artificial intelligence (AI) as a facilitator of large amounts of structured and unstructured data analysis, which are generated by companies and their customers. AI will also may help to interpret all data together and make predictions.

Another trend is the search for new ways to interpret data, which means, new ways to communicate results. For instance, with the development of analysis tools aimed at the use of human language, such as natural language processing (NLP), and the use of extended reality (XR), virtual reality (VR) and augmented reality (AR).

The third trend is the influence of hybrid cloud computing with edge computing on Big Data, the ability to access large data stores and act on real-time information without the need for expensive infrastructure with devices built to process data where it's collected, rather than sending it to the cloud for storage and analysis .

Finally, the growth of the use of DataOps methodology, which in this context, means removing obstacles that limit the usefulness or accessibility of data and implementation of data tools. In addition, interest from professionals with experience or interest in an IT career in this area is expected to grow, as no formal training is required to work with DataOps.

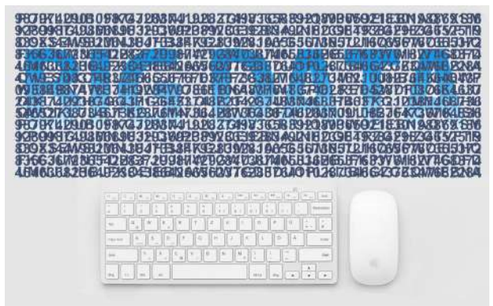

Image from Gerd Altmann by Pixabay, accessed in 11/06/2021

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The digital nomads

The digital nomads have grown every year, namely due the global changes shifting the physical office environment to the remote work. Therefore, the fast and continuous adoption of new technologies, associated with the current global scenario, contributed to spread the digital nomads.

According to Eurostat data of 2021, in 2020, 12.3% of employed people between 15 and 64 years old in EU worked from home, with a higher proportion of women (13.2%) compared to men (11.5%).

Between 2019 and 2020, in the United States, it was registered a growth of 49% of the digital nomads, which means, in 2020, approximately 11 million Americans. Moreover, 17 million of people would like to become nomads in the near future.

Besides this style is more attractive to young males, 33% are women and 54% of the nomads are 38 years old or more, with a predominance in areas which require creativity skills, but also in IT and marketing fields.

The “nomads” work without a fixed physical location, with technological skills, which allows them to work and travel to any part of the world. In this context, many nomads drive their business in other countries in shared workspaces, cafeterias or libraries. To adopt this lifestyle, adaptability is required, either by companies and professionals. Thus, many technologic companies have developed ways and tools, such as investing in technologies related to cybersecurity, to allow organizations to encourage this type of work and make professionals more comfortable working remotely.

In addition, some countries have created ways to attract nomads, such as Barbados and Bermuda, which have launched remote work visa programs for these professionals. Therefore, in order to assess the countries with the best opportunities for nomads, a survey was carried out in 2021 by InsureMyTrip considering the following criteria: Internet access and speed, housing rental costs, language difficulties, openness to digital nomads, cost and access to a work visa and duration of the remote work visa.

The results of this survey indicated that Portugal occupies the 4th position in terms of the best opportunities for nomads. Together with Norway and Greece, Portugal does not limit the stay of a worker with a remote work visa and allows an indefinite stay, provided that the necessary requirements are met. In Madeira, in February of this year, was opened the first village for digital nomads in Madeira island, Digital Nomads Madeira Islands, where all services and applications are provided as a way to make their stay more accessible. Thus, the village's proposal is to attract professionals who wish to improve their work travel experience, encouraged by the region's natural beauty, in addition to promoting the image and tourism. In addition to being a business opportunity, since professionals are planning for the post-pandemic scenario and want a better quality of life and work anywhere in the world.

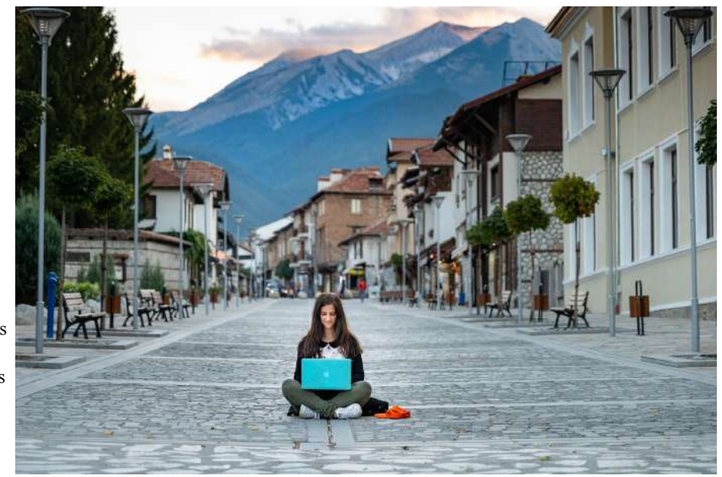

Image from Matthias Zeitler by Pixabay, accessed in 11/06/2021

Delgado, R. 2021. What The Rise Of Digital Nomads Means For Destination Real Estate. accessed in 05/06/2021
InsureMyTrip, 2021. Best Countries for Remote Work Visas & How to Apply. accessed in 05/06/2021
MBO Partners. 2018. Digital Nomadism: A Rising Trend. accessed in 05/06/2021

Did you know...

On June 5th, is celebrated the World Environment Day, a date instituted by the United Nations (UN) as a way of raising awareness in society regarding the environmental issues and the importance of preserving natural resources.

In a moment when the Earth presents an imminent risk of reaching an inflection point in the planet's life support systems, new technological trends that emerged with the 4th Industrial Revolution may be a solution to these issues, moreover, promoting the goals of Development Sustainable (ODS). Namely, the goals (SDG 8) decent work and economic growth, (SDG 9) industry, innovation and infrastructure and (SDG 12) consumption and sustainable production; which require actions that involve the updating of digital technology in industrial sectors, support for domestic technology R&D and innovation, in addition to increasing access to information. In relation to consumption, the goals involve the reduction of waste, with more sustainable purchases through the strengthening of scientific and technological capacities.

Therefore , in addition to helping businesses, developing entrepreneurship, making workers training faster and more efficient and providing the necessary tools and skills, the adoption of digital technologies may reduce global carbon emissions by up to 15%, which corresponds to one-third of the agreed 50% target for 2030, through solutions or practices in the areas of energy, manufacturing, agriculture, construction/building, services, transport and traffic management. This reduction represents more than the combined carbon footprint of the United States and the European Union. The use of technologies such as 5G, Internet of Things and artificial intelligence is essential to drive action against climate change. Another example is the use of artificial intelligence techniques, enhanced learning, as a way to solve complex problems associated with environmental and climate dynamics.

Furthermore, the digital sector has the potential to reduce its own emissions, which account for 1.4% of global emissions, while promoting growth in the area of data performance and stimulating the implementation of renewable energy. On the other hand, between 2010 and 2019 there was an increase in the amount of electronic waste generated, from 5.3kg per capita to 7.3kg.

Companies around the world are waking up to their environmental responsibilities, launching many climate-saving initiatives with ambitious targets. Reinforcement learning may assess the effects of these initiatives.

Image from David Bruyland by Pixabay, acessed in 11/06/2021

Sault, S. 2020. Tech for Good: What are the challenges in making technology and digitization more sustainable?.

Ekholm, B., Rockström, J. 2019. Digital technology can cut global emissions by 15%. Here's how

Hohn, N., Fleming, O., Zhang, R. 2021. A This AI technique could use a digital version of Earth to help fight climate change

Aveiro Labour Observatory – Start of the Awareness workshops

The Aveiro Labour Observatory has the specific mission to offer a prospective view of the qualification needs of Aveiro, systematically providing information to citizens, education and training entities, companies and other stakeholders, on the skills needs required in the labor market for the digital transformation. Based on the diagnostic work carried out by the Observatory and in accordance with the provisions of the STEAM CITY project, the pilot training programs will now be implemented, allowing for testing responses to the identified qualification priorities.

The implementation of the training program is organized in two main moments:

In June and July of 2021, four (4) Awareness Workshops will take place, dedicated to priority training areas, with the objective of presenting the programs and training (which will start in September) and to raise awareness in the community regarding the emerging areas of qualification and professional growth.

As of September 2021, the 4 pilot training programs will start in the following thematic areas:

Program 1 - From the factory floor to Machine Learning applications in industry 4.0 - 52 hours

Program 2 - Machine Learning and Large Scale Data Analysis - 52 hours

Program 3 - Digital Marketing - 100 hours

Program 4 - Process design, modeling and management - 52 hours

The Awareness Workshops will take place in face-to-face format from 5:00 pm to 8:00 pm (with a limited number of participants) and will be broadcast online, simultaneously, on the following dates and themes:

June 23	June 30	July 07	July 14
Monitoring to Optimization: sensing, analyzing and visualizing data and machine learning	Big Data Computing Technology as support for Industry 4.0	Promotion of Products and Services in Digital Media: content creation forms and digital dissemination	Challenges and good practices in designing and mapping processes by digital means

Participation in these actions is free, but subject to previously registration and ranking, following criteria to be presented at Awareness Workshops. For more information, see the Observatory's website and our social networks.

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

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