*Dr Rose Marie Azzopardi & Prof Alexiei Dingli*

Dr Rose Marie Azzopardi is an economist
Prof Alexiei Dingli, is Professor of Artificial Intelligence

# Why data science matters



LIFE is changing so fast that coming across new terminology is nothing strange.

Burning Glass Technologies is an analytics software company that has built the largest and most sophisticated database on the labour market and the skills needed for a continuously changing labour environment. Through their method of data scraping of current vacancies and the skills required by each of these vacancies, they can then use that knowledge to inform the needs for new training programmes to upskill current and future workers, and in turn also provide the basis for new higher education programmes or changes to existing courses.

This is only one way how data is being used as a powerful tool to prepare and be proactive for tomorrow's economy. The data scientist is one of the new jobs that is framing the future. So much information is provided by individuals in their daily lives, whether they are opening a new bank account, chatting on WhatsApp, posting on Facebook, ordering a product via the internet, applying for a loyalty card, sending in their cv for different jobs, driving certain types of cars, reading a newspaper online, paying with credit cards, carrying a mobile wherever one goes and so many more mundane activities.

These are all providing data to companies who collect them to then sell them on to interested persons.

The adverts that appear on my laptop are not the same that appear on yours. Since the data they collect on each of us is different, even our preferences and choices are not the same. Such data analysis is thus a means of targeting clients with specific marketing strategies.

Similarly, data scientists can be used to analyse in real-time the skills needed in the labour market. Jobsplus data shows that during 2020 the economy created over 20,000 vacancies, roughly 400 a week.

The type of skills they require form the basis for a database which will help institutions organize reskilling and upskilling training programmes which businesses need. Data scientists can come from different academic backgrounds, but knowing technologies such as Python and R is the first step to be able to manage the quintillion bytes of data which are produced on a daily basis in the business environment.

Most data scientists come from four main academic fields: data science & analysis; computer science; statistics & mathematics; and economics & social sciences. The Skills Needs Database would provide significant backing for the Human Capital Research Project sponsored by the HSBC Malta Foundation and supported by the Ministry for Education, the Malta Chamber of Commerce, the Malta Business Bureau, the University of Malta and the Malta College of Arts, Science and Technology.

The project aims to analyse the current and future economic environments and their impact on Malta's labour market while also highlighting the skills needed.

Through this project, we must ensure to prepare our country to tackle the challenges arising from the digital world of tomorrow.