## GLOSSARY

| Term | Definition |
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| Adaptive Learning Programme | An online educational programme which changes and adapts the learning material. This is so that the student will have the best learning experience and can be either to how a student performs or to a type of material type that the student interacts better with. |
| Alibaba | A Chinese multinational company that specialises in e-commerce. |
| Algorithm | A set of rules ran by a computer application to solve a problem. This includes calculations, reasoning and data processing which can be a simple process, such as multiplying two numbers, or a complex operation, such as playing a compressed video file. |
| Amazon | The world's largest Internet-based retailer, selling a wide range of products and services. |
| Amazon Alexa | A virtual assistant voice-based service created by Amazon that allows you play music, check the weather, make calls, ask questions and synchronise your other devices such as smart lightbulbs so you can turn off the lights using your voice. |
| Amazon Echo | A virtual assistant voice-based speaker (using Amazon's Alexa assistant) which allows you play music, check the weather, make calls, ask questions and synchronise your other devices such as smart lightbulbs so you can turn off the lights using your voice. |
| Amazon Prime Air | Amazon's Prime Air drone is a delivery system in development that will use unmanned aerial vehicles (also |

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| | called drones) to transport goods from the company's warehouses to the consumer. |
| Amazon Rekognition | Amazon Rekognition is an image and video analysis service available in the Amazon AI suite. You provide an image or video to the Rekognition application and the service can identify objects, people, text, scenes, and activities, as well as detect any inappropriate content in the content that has been provided. Amazon Rekognition also provides highly accurate facial analysis and facial recognition on images and video provided. You can detect, analyse, and compare faces for a wide variety of user verification, people counting, and public safety use cases. |
| API | Application Program Interface. A way of connecting different computer systems that consist of a set of operations that computer developers can use, along with a description of what the operations do. |
| Artificial Intelligence (AI) | Artificial intelligence refers to the development of computer-based solutions that are able to perform tasks which mimic human intelligence. |
| Audio Processing | Detects and translates sounds and signals |
| Augmented Reality | A technology that can place images, animations and sounds over real-world objects using Computer-Generated Imagery (CGI) viewed through an Augmented Reality (AR) device e.g. a phone. For example, the game Pokémon GO uses Augmented Reality by placing the different Pokémon strategically in different locations that you can find and view using your phone. |
| Automation | Automation makes a process run by itself with little or no interaction from people by following patterns and rules to perform repetitive tasks. For example, automation is used by machines to carry out repetitive tasks in the manufacturing industry for making cars. It's key to note that pure automation is not Artificial Intelligence. |

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| Autonomous Vehicle | A vehicle that can sense its environment and guide itself without human control. |
| Babylon | A health application (app) which uses speech recognition and Natural Language Processing (NLP) to consult patients and check their symptoms against a database, while offering them treatments that match their symptoms and medical history. |
| Bias | The action of supporting or opposing a particular person or thing in an unfair way. In other words, letting your personal opinions influence your judgment unfairly (e.g. gender bias, race bias, age bias, …) |
| Biometric Data | Computer data related to human characteristics that is typically used for identification e.g. fingerprints, voice, vein pattern. |
| Biotechnology | Biotechnology is a technology that involves the use of living organisms. It is mainly used in agriculture, food science, and medicine. In biotechnology, living organisms are used to make useful chemicals and products or to perform an industrial task, such as using the fermentation reaction in yeast to make beer. Biotechnology is often used to refer to genetic manipulation of microorganisms to produce antibiotics. |
| Bloomberg | A major global company that provides financial news and information. |
| Bloomberg Vision | A program created by Bloomberg which allows you scan an object using your camera and produces real-time data and news on the company that makes the products. It also allows you scan money to see cross-currency rates. |
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| Bots | An automated program (short for "robot") that runs over the Internet. Some bots run automatically, while others only execute commands when they receive specific input. |
| Chatbot | A computer program designed to simulate an intelligent conversation on a text or verbal basis. It can be hosted in most major chat platforms like Facebook messenger, text messaging and many others. Chatbots are typically used for various practical purposes such as customer service. For example, if a customer typed the question 'What time does your store open tomorrow morning', using the information available, the chatbot would immediately respond in the same way as a human would. 'Our store opens at 9am tomorrow morning and closes at 5pm'. |
| Collaborative Intelligence | The ability to think & work collectively (collaboratively) as a team. |
| Computer Vision | The ability to allow computers to see, recognise and process images in the way that humans can through video or image analytics. |
| Conversation Intelligence Software | Software that can determine the direction or outcome of a particular conversation. |
| Dashboard | A dashboard displays data in the form of tables, line charts, bar charts and gauges. Dashboards are customisable in order to meet the specific needs of a company or department.<br>It is an information management tool used to analyse large volumes of data to investigate trends, predict outcomes and discover insights. |
| Data Categorisation | The organisation of data into different logical groups (e.g. birthdays, names, etc). |

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| Datasets | A dataset is a collection of data with different categories. For example: at work a dataset (which could be a excel sheet) might contain information about several employees such as their names, salaries and contact information. Each category (e.g. name, salary etc) could be represented in different columns. |
| Data Visualisation | The visual representation of data on a report or dashboard (e.g. graphs, scatter plots, etc) |
| Deep Learning | A type of machine learning where algorithms learn from examples using large amounts of data, repetition & tweaking to improve the outcome. |
| Domino's | An American pizza restaurant chain. Founded in the United States in 1960. |
| Drone | An unmanned aircraft that can be remotely controlled by an individual using software-controlled flight plans and GPS. Drones are used in a lot of industries, for example the military, search and rescue, surveillance, traffic monitoring, and weather monitoring. Personal drones are also becoming more and more popular, for example for concerts or wedding photography. |
| Facial Recognition | A technology that can identify a human face from a digital image or video using features of the person's face and comparing it within a database. |
| Facebook | An American social media and social networking service. After registering to use the Facebook website, users can create a profile indicating their name, occupation, schools attended and so on. Users can add other users as 'friends', exchange messages, post status updates, share digital videos and links, use various software applications ('apps'), and receive notifications when others update their profiles or make posts. Additionally, users may join common-interest user groups organised by workplace, |

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| | school, hobbies or other topics, and categorise their friends into list. |
| Google Assistant | Google Assistant is a virtual assistant developed by Google that that can perform tasks based on voice commands. |
| Google Cloud Vision | A computer vision (image / video analysis) product produced by Google which categorises images by analysing areas of the picture to detect faces, characters, objects, etc. |
| Google Home | A smart speaker powered by Google Assistant which allows you play music, check the weather, make calls, ask questions and synchronise your other devices such as smart lightbulbs so you can turn off the lights using your voice. |
| Hardware | Physical parts of a given device e.g. the protective case of a phone. |
| Human Augmentation | To enhance or improve the capacity or productivity of humans using technologies. |
| Hyundai | Hyundai Motor Company is a South Korean multinational automotive manufacturer headquartered in Seoul. The company was founded in 1967 by Chung Ju-Yung and is the third largest vehicle manufacturer in the world. |
| H&M | A Swedish multinational clothing-retail company known for its fast-fashion clothing for men, women, teenagers and children. |
| IBM Watson | Watson is IBM's suite of enterprise-ready AI services, applications, and tooling. It lets you automate the AI lifecycle, build powerful models from scratch or lets you use pre-built apps that increase the speed of making a model. |

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| Image Categorisation | The process of putting images into different categories. |
| Image Recognition | When computers can detect or recognise objects, people, etc within a given image or set of images. |
| Industrial Analytics of Things | When devices in the industrial setting become smarter and more intelligent, bringing together data from everywhere. |
| Intelligent Voice Assistant | Software which can perform tasks for a person based on voice commands, normally integrated into a smart speaker such as Alex Echo or Google Home |
| Internet of Things (IoT) | The growing network of objects connected to the internet. These objects can collect and send data to each other. Examples of 'things' in the IoT include fitness trackers, home lighting, and security systems that can be controlled remotely on a mobile device. |
| IPsoft Amelia | An AI chatbot launched by technology company IPsoft for customer support/helpdesk applications |
| Kik | A popular instant messaging service targeted at teens and young adults. It was founded in 2009 by the Canadian company Kik Interactive. |
| Knowledge Representation | Representing information about the world in a form that a computer system can use to solve a complex task. |
| LYmph Node Assistant (LYNA) | Google's deep learning program that is trained to recognise the characteristics of tumours relating to metastatic cancer. |
| Machine Learning | A type of artificial intelligence that enable systems to learn patterns from data and subsequently improve from experience. As it gathers and sorts more information, |

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| | machine learning constantly gets better at identifying types and forms of data with little or no hard coded rules. For example, through pattern recognition, machine learning will increase the accuracy of identifying specific objects or images. |
| Manual Configuration | Manually setting up a device in the way that you want it to work. |
| Narrow/weak AI | AI solution designed and trained for a specific task |
| Natural Language Processing (NLP) | The ability of computer solutions to understand and interpret natural human language. |
| Netflix | An American entertainment company founded in 1997 that provides DVD rentals and Internet-based video-on-demand services, through a monthly subscription. |
| Operations Analysis | The examination of operational systems with the aim of improving them. |
| Pattern Recognition | Pattern recognition is the automated recognition of patterns or irregularities in data.  For example, pattern recognition may be used to determine whether a given email is "spam" or "non-spam". |
| PayPal | An online payments system used for sending and receiving monetary values. |
| Predictive Maintenance | A maintenance strategy which helps prevent equipment failure by predicting when equipment may potentially fail so the equipment can be replaced before failure occurs. |
| Recommendation Engine | A solution which provides suggestions |

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| | (recommendations) based on analysing possible interests or search history (e.g. recommending similar types of music once you've listened to a specific song online). |
| Reinforcement Learning | Learning to ensure the best outcome is achieved. The system learns to change its actions as a result of continuous feedback. The AI is rewarded for performing well and penalised for performing badly in order to maximise performance. |
| Responsible AI | Is the ethical build of artificial intelligence. |
| Self-driving Cars | A vehicle that can detect its environment and operate with little or no human input. |
| Service Orientation | Positive customer service behaviour and attitudes in a way that responds to consumers' needs and expectations. |
| Siri | Apple's virtual assistant that can perform tasks based on voice commands |
| SleepScore | A sleep improvement application (app) which measures how well you sleep |
| Smart Assistant | A technological solution which can perform tasks for a person |
| Smart City | A city that uses Internet of Things (IoT) technologies to gather data and use the data to organise and manage its resources efficiently ((e.g. closing bridges automatically when pollution reaches a high level) |
| Smart Devices | An electronic device generally connected to other devices via network over the internet. There are increasingly more "smart" devices everywhere: smart meters (for gas/electricity), smart glasses (where you can take photos), smart cars, smart appliances and more. |

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| Social Perceptiveness | Having an understanding and awareness of a situation and the way in which others react to it |
| Software | A computer program required for a computer to function or to perform a specific task |
| Sound Pattern Recognition | The process of classifying sounds into different categories and recognising patterns in the sounds. An artificial intelligence solution could use or train a model to recognise patterns. |
| Speech Recognition | The translation of speech into text or a format that machines can read. |
| Strong AI | An AI solution whose intelligence matches that of a human brain across multiple & differentiated tasks. |
| Systems Analysis | The examination of systems for issues and improvements. |
| Text Analysis | The examination of text to determine meaning and content (e.g. the customer is talking about a specific product). |
| Translating Speech to Text. | When technology turns language/voice that is spoken into a textual transcript. |
| Uber | An American transportation company headquartered in California, United States. It uses an app-based system to pick up passengers that have requested a car and drops them off to their said location, with the functionality of tracking your driver on a map on the Uber app. Uber has also now developed to become a food delivery service, through using the Uber Eats app. |

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| Unconscious Bias | Unconscious bias refers to a bias that we are unaware of, and which happens outside of our control. It is a bias that happens automatically and is triggered by our brain making quick judgments and assessments of people and situations, influenced by our background, cultural environment and personal experiences. What's interesting is that sometimes this may actually go against some of our conscious beliefs. |
| Virtual Assistant | Software which can perform tasks for a person using voice activation (e.g. turning on the lights using your voice). |
| Virtual Reality | An artificial environment that is created with software which a user can experience through devices such as video headsets. The environment can be combined with physical spaces, realistic images, sounds and other sensations that stimulate senses and simulate the user's physical presence in a virtual (imaginary) environment.<br><br>VR is often used in gaming, but is also used to train individuals e.g. pilots, fire fighters, so they can learn what to do in an authentic experience without the actual associated danger. |
| Waze | A mapping and navigation application for mobile devices, acquired by Google in 2013. Waze provides real-time traffic updates that are gathered by drivers on the road, so that slow traffic and traffic jams are taken into consideration when it finds out the best route for other Waze users traveling in that direction. This is known as "social navigation." |
| World Economic Forum | An international organisation which engages in worldwide business, political and academic agendas. They host a week-long conference in January, in Davos (Switzerland) which political parties, heads of state and C-suite executives attend to debate a variety of topics. |

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| Zalando | A German e-commerce company which provides fashion and lifestyle products worldwide. |
| 3D printing | The use of a printer for creating plastic objects that are 3D from a digital model of the object that the user would like to print. E.g. door stops, toys, vases. People are now using these to replace broken parts of machinery, as part of plane construction, etc. |