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AI (ARTIFICIAL INTELLIGENCE)

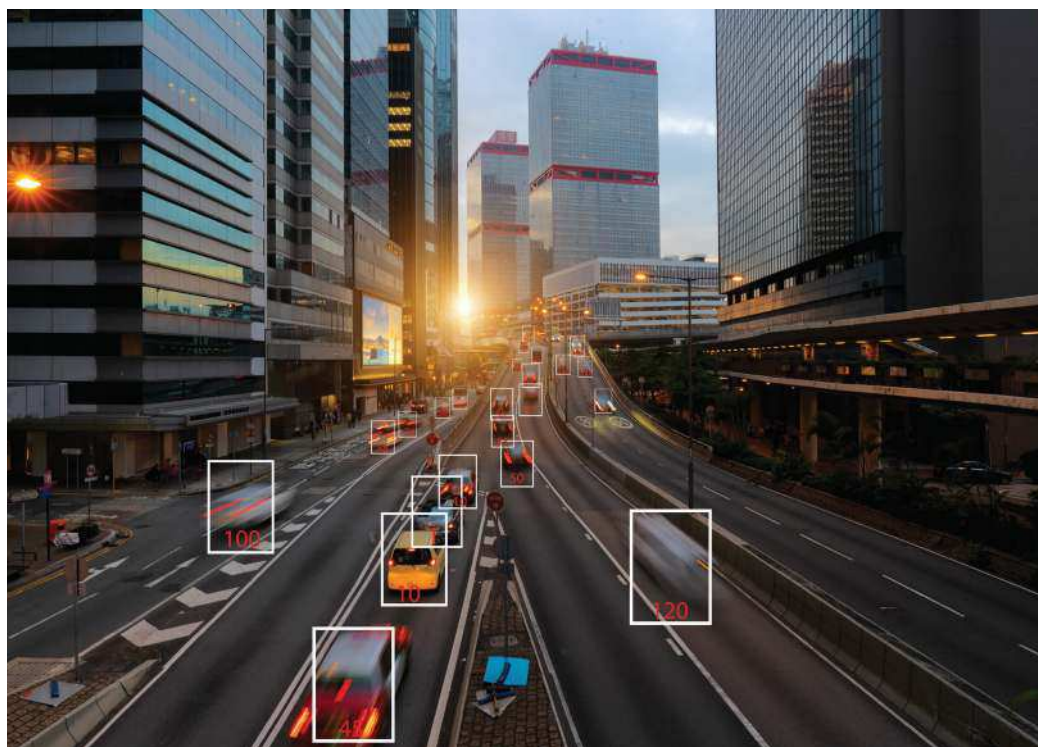


Something that both excites and terrifies us is seeing machines execute the code we give them and, even more so, making decisions at a speed beyond human capability. Machines are seemingly becoming more 'intelligent' as they work through algorithms of immense proportions. The dawn of the thinking machine is already here and we have named this new technology artificial intelligence. From computers that diagnose diseases to cars that drive themselves, the rise of artificial intelligence is on a journey that is seemingly limited only by our imaginations.

Hollywood has painted a bleak dystopian future for humankind where artificial intelligence has completely overridden all human elements in computer technology and

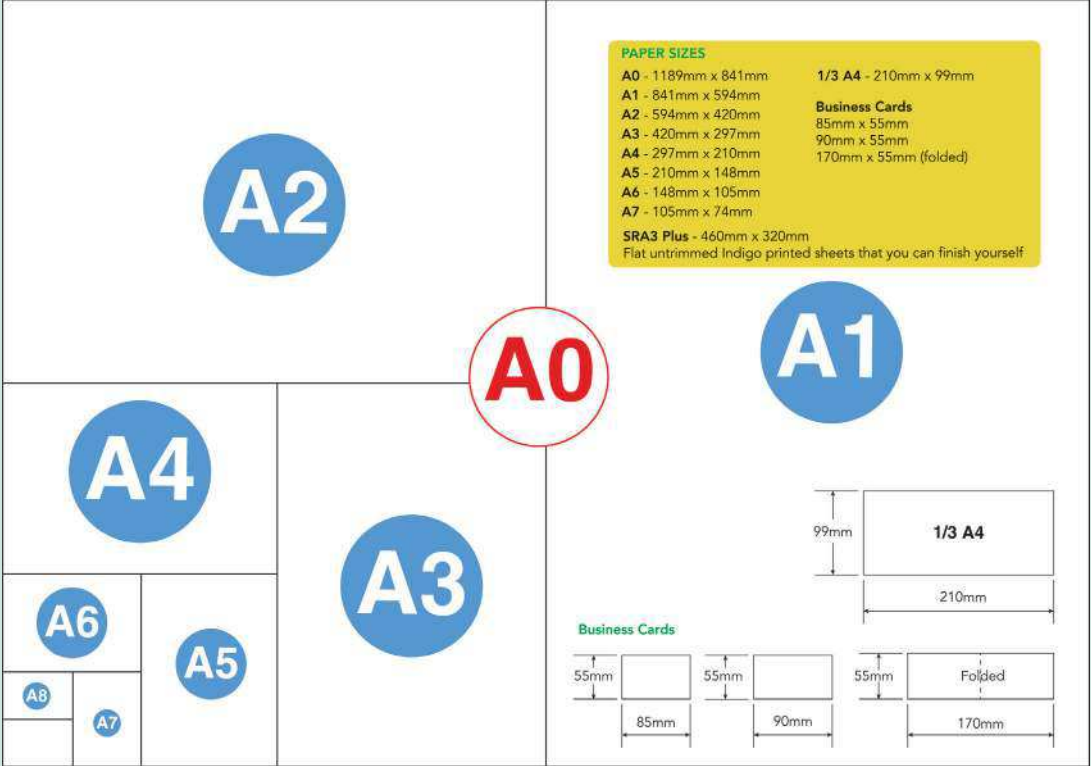
we are at the mercy of the very technology we created to serve us. However, as 'intelligent' as computer systems may seem, they will still *always* rely on the basic building blocks of algorithmic expressions and follow the paths we have created for them.

With more processing power than ever before and the integration of systems into everyday devices such as televisions, fridges, house management systems and so on, artificial intelligence is becoming more part of our lives than we think. Artificial intelligence should be seen as a stepping stone towards what humankind is technologically striving towards: a place where humanity and technology are intertwined for the betterment of society and improving the lives of all.



A A4

A4 A standardised size of paper with the dimensions 210 x 297 millimetres, or 8.3 x 11.7 inches. This is the most commonly used paper size for printing.



absolute cell referencing When a particular cell in a spreadsheet must be referenced consistently or exclusively without changing, it is then fixed in the function or formula so it does not change. For example, when dragging a cell down to copy a formula and you need a cell reference not to change, it might look this: =B7*\$A\$1 i.e. cell A1 is always referenced even when the formula is dragged down. See [cell](#); [spreadsheet](#)

acceptable use policy (AUP) A policy that covers what a business deems to be the acceptable use of their hardware and/or software on company premises or of services provided. It can also be contained in a contract with subscribers to a service and states what a user can or cannot do as a subscriber. Most AUPs consist of liability disclaimers, billing rules, fair use policy, and terms and conditions of usage. See [fair use policy](#); [hardware](#); [software](#)

access point Most commonly a point of access to a wireless network. It is often a router, connected to the Internet, which allows multiple devices to connect wirelessly to it and shares the access between those devices. The router can also be referred to as a base station. Some access points require a secure password to allow connection, whilst others are open for public access. See [base station](#); [Internet](#); [router](#)



accounting format In a spreadsheet document, when data is formatted as currency, the currency symbol (R in South Africa) is located on the far left in the cell regardless of how many digits are in the cell. See [cell](#); [data](#); [spreadsheet](#)

add-on In terms of software, an add-on is third-party software that can be installed to extend the capabilities of existing software. For example, a web browser may make use of an add-on when it needs to display content that it inherently is unable to display i.e. multimedia-based content such as video or audio. YouTube was a prime example when it began as it needed a browser to install the Adobe Flash Player (an add-on) in order for the user to view the video content. Most browsers these days do not require many add-ons as browsers support new technology. See [software](#); [third-party](#); [web browser](#)

address book Any communications application that contains and stores the names, telephone numbers, email address and other information of your contacts, and can be edited.

Adobe Acrobat Reader An application designed by Adobe Systems to allow users to open and read documents in portable document format (PDF).

See [PDF](#)



ADSL (asymmetric digital subscriber line) A copper telephone line that supports two-way data transfer. Upload and download speeds are not the same. Download speed is faster than upload, hence the asymmetric attribute. This method of connectivity is gradually being replaced by faster technology such as fibre lines. See [data](#); [fibre optics](#)

advocacy website A website that has been created to promulgate further support for a particular cause or established idea. Some examples would be websites that support human rights, anti-trafficking, anti-cruelty towards animals, charities, or even political agendas. A well-known advocacy group in South Africa is OUTA (Organisation Undoing Tax Abuse). See [website](#)

adware Software that contains advertisements. Often the advertisements are part of the software and may consist of banners built into the interface of the software or they may be windows that open from time to time that display advertisements. The purpose of the advertisements is for the proprietor of the software to gain revenue each time an advertisement is displayed to a user or if the user clicks on an advertisement to view further information. Adware can often be distracting or rather cumbersome due to the effect it has on the user experience (UX). Some applications offer ad-free or premium versions where the advertisements are removed upon purchase of the software. See [interface](#); [software](#); [UX](#)

AI (artificial intelligence) First coined by John McCarthy in 1955 at Dartmouth College. The main aim of AI is to create a computer (or software) that is capable of simulating a human being or having the ability to learn by analysing big data and employing sophisticated algorithms to solve problems or process data.

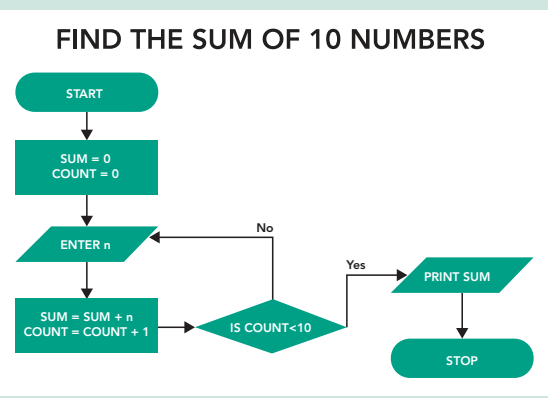
AI's technological progression and development relies on deep-learning, vision i.e. pattern recognition and image processing, language processing, and the use of advanced algorithms.

AI is beginning to affect many industries such as health care, retail, manufacturing and sports. Because of AI, other technologies are growing rapidly such as Internet of Things (IoT), machine learning, space exploration, robotics, and science.

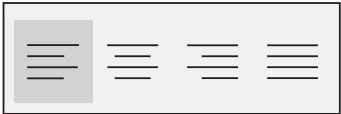
See [algorithms](#); [big data](#); [deep learning](#); [IoT](#); [machine learning](#); [software](#)

A algorithm

algorithm The word comes from the Latinised name of a Persian mathematician, astronomer and geographer called Muhammad ibn Musa al-Khwarizmi. An algorithm is a list of steps/ instructions or a process/formula that is followed to solve a problem. Tasks performed by computers are based on algorithms, for example, addition and subtraction rely on fixed algorithms in order to complete the calculations.



alignment A very common tool in word processors, alignment refers to where the text is aligned in relation to the margins of the page, text box, cell or print area in which it is contained. The most common settings are: left-aligned, centre-aligned, right-aligned, and justified. In table cells vertical alignment is also possible.



See [cell](#)

AMA (ask me anything) A term made popular on the site Reddit. Reddit is a news aggregator, web content rating, and discussion forum site. The premise for the acronym follows an unconventional interview approach where interviewees introduce themselves online and then proceed to answer questions from the online community. Interviewees are often celebrities or well-known people in their profession.

See [Reddit](#)

AMD Athlon (Advanced Micro Devices) A company that produces computer processors. Athlon refers to a processor created by AMD with a 200 MHz frontside bus, support for PC1600DDR memory, and operates at speeds of 900 MHz to 1.3 GHz.

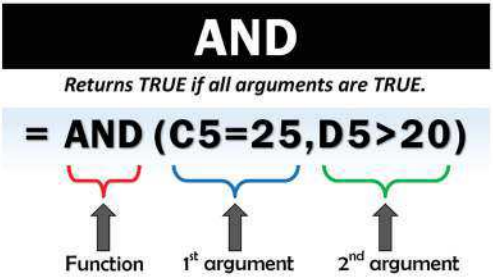
See [bus](#); [DDR](#); [gigahertz](#); [megahertz](#)

analog Any electronic communication that is sent with varying signals of frequency is known as analog data, for example telephone calls via copper landlines and audio signals via record players (turntables). Analog data works with frequencies and not ON/OFF states like digital data that estimates analog data using zeros and ones. With most information today being stored digitally, analog data is often converted to digital data because it is easier to store and manipulate.

See [digital](#)

AND A spreadsheet function. Returns TRUE if all arguments or criteria supplied are met or true. Example: =AND (C5=5, D5>4) means that the data in cell C5 must be equal to 5 and the data in cell D5 must be greater than 4 for the condition or argument to be true.

See [cell](#); [data](#); [function](#); [spreadsheet](#)



Android Created by Andy Rubin in October 2003 and then bought by Google in August 2005, Android is an open-source operating system for mobile devices.

See [Google](#); [open-source](#)

Did you know?

The Android logging system has a method called wtf, which stands for 'What a Terrible Failure'.

anime A Japanese term meaning animation. The style of this animation consists of colourful graphics, vibrant characters and abstract representations of people, animals and fantasy beings.

anti-malware Software designed to identify, remove or quarantine programs written to disrupt the normal functioning of your computer.

See [malware](#); [software](#)

anti-spam Spam – unsolicited junk mail – accounts for billions of emails on a daily basis. With today's technology, most Internet service providers (ISPs) have built-in anti-spam measures and are very effective at blocking junk mail consisting mostly of advertisements, scams or phishing attacks. There are very few anti-spam products on the market today as popular email clients and ISPs who provide webmail have anti-spam measures as an integral part of their software.

See [ISP](#); [phishing](#); [software](#); [spam](#); [webmail](#)

anti-spyware Very similar to anti-virus software. Anti-spyware is designed to monitor a computer system and block any software that has been designed specifically to gather information on your computer without your knowledge. For example, anti-spyware will monitor incoming information from websites, emails and downloaded files, and also any suspicious applications that may require more information from your computer than is necessary.

See [software](#)

anti-virus Software that has been designed to guard against malicious applications (viruses) by recognising signatures or patterns in the source code of the offending program and taking action against it. Actions taken include deleting the program, quarantining or ignoring it, or asking the user to decide which action to initiate. Anti-virus programs rely on definitions or lists provided by the company in order to stay up to date so as to be able to recognise the latest viruses. These definitions are downloaded on a regular basis as specified by the program or user.

See [quarantine](#); [software](#); [source code](#); [virus](#)

Apple Apple Inc. is an American multinational technology company headquartered in Cupertino, California that designs, develops and sells consumer electronics, computer software and online services.

See [MacOS](#)

application An application is a program written by a developer/programmer or a team of developers/programmers that allows a user on a computer system to perform certain tasks.

Applications can be categorised according to their overall purpose: computer management software, utility software, communications software, desktop publishing, multimedia editing, database software, presentation software, spreadsheet software, and word processing software.

See [software](#)

A apps

apps An abbreviation for applications. The term ‘apps’ commonly refers to programs that a user would install and run on mobile devices such as tablets and phones. With the progression of operating systems such as Windows 10 or Apple X, integrating an app store into the operating system has resulted in the term app now also being applied to the laptop and desktop market. In other words, an app is simply another term for application.



archiving Storing data that is not regularly accessed in another location, or compressing it into a zipped or compressed file, or perhaps moving it to another location. The storage location could be cloud storage, off-site storage or on an external drive that is not regularly accessed. Archiving is used when information is not needed anymore but a user does not necessarily want to delete it so it is stored for potential access at a later stage. Archives can consist of multiple files placed into a single compressed file and can be used to reduce file size, to free up disk space, and to back up data. See [cloud storage](#); [data](#); [ZIP](#)

ASCII (American Standard Code for Information Interchange) The universal standard that computers use to represent all letters, numbers and punctuation. Every character on a keyboard has an ASCII code, with every letter being assigned a number from 0 to 127. Examples of ASCII code:


Character	ASCII code
#/£	#
A	A
a	a
©	©
!	!
5	5

Did you know?

If you hold down the ALT key on your Windows keyboard and type 0169 followed by ENTER, you get the copyright symbol ©.

associate file extension Every file on a computer consists of a filename and an extension. The extension denotes what type of file it is and which application on the computer will open it. When a file has an extension that the computer does not recognise or the file has no extension, a user will not be able to open the file without instructing the computer which application to use. Users can choose to associate a file extension with an application of their choice.



attachment A document or file that is added to a message such as an email. Any file added to the message by clicking on the well-known paperclip icon  is referred to as an attachment.

attenuation As a signal travels over a long distance, the strength of the signal gets weaker. This is true of cabled connections and wireless signals. This is why we use repeaters in wireless networks. See [repeaters](#)

augmented reality (AR) Augmented reality is an implementation of virtual reality (VR) where the real-world view is augmented by an overlaying digitally-created interface so that the two create an enhanced view of the physical world. This is done through the use of hardware devices such as mobile phones, webcams, and specially designed glasses with AR and VR technology embedded. Sensory information, such as auditory and visual, is added to the physical world via the digital interface software of augmented reality.



See [hardware](#); [interface](#); [software](#); [virtual reality](#)

AUP (acceptable usage policy) Similar to acceptable use policy. A policy put in place by a service provider regarding the usage of their services. This policy could state the terms of use of company-provided hardware and software, access to and use of online services provided by an employer, and the use of external devices on a company network.

See [hardware](#); [network](#); [service provider](#); [software](#)

A authentication

authentication The process where a user is given access to information based on data particular to that user only. Most levels of authentication consist of a username and a password. Other methods include personal identification number (PIN) codes; image passwords; and biometric data such as voice recognition, facial recognition, and retina or fingerprint scans. The more complex the authentication method, the less chance there is for protected information to be compromised.



See [biometrics](#); [data](#); [facial recognition](#); [PIN](#)

AutoCorrect Commonly misspelled words are automatically corrected by the input software on the computer or mobile device being used. The aim is two-fold: (1) to build a database of commonly used and misspelled words so as to (2) enhance the process of communication by saving time in the typing process.

See [database](#); [software](#)

AutoFill Based on user input, a program can almost predict what information may be inputted next with an intuitive guess. For example, if a user types in the word 'Monday' in a spreadsheet cell and then drags that cell down using the drag handle, the next cell will be 'Tuesday' and so on. AutoFill is also found in predictive text features in email clients and social media messaging applications (also referred to as AutoText).

See [cell](#)

AutoFormat A feature of popular word processing applications where text that is typed in is automatically formatted based on its context. For example, typing in 1 and st produces 1st.

AutoNumber This is found in Microsoft Access. When a field in a record must be unique in a database, the data type of the field is designated as AutoNumber. Every newly-created record automatically receives an incremented numerical value to ensure that every record in the database has at least one unique piece of data to differentiate it from other records.

See [database](#); [field](#)

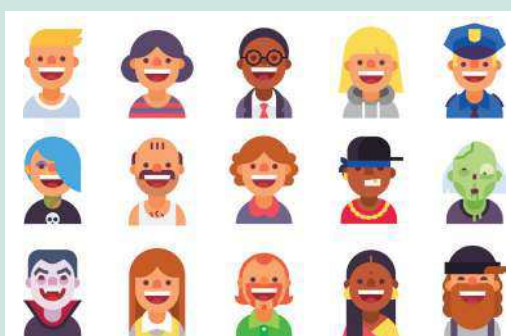
AutoShapes A feature found in many word processing, spreadsheet, presentation and desktop publishing (DTP) applications. It allows the quick drawing of a selected shape by using only the mouse or stylus. The shapes are able to be formatted and some applications let you edit the shapes to change points or angles, etc.

See [DTP](#)

avatar An icon or image used to represent yourself online. A virtual digital representation of yourself often used in discussion forums or when posting comments on blogs.

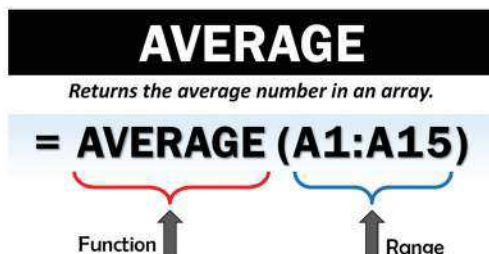
Did you know?

The word avatar is also used to refer to the superuser on a Linux open-source operating system.

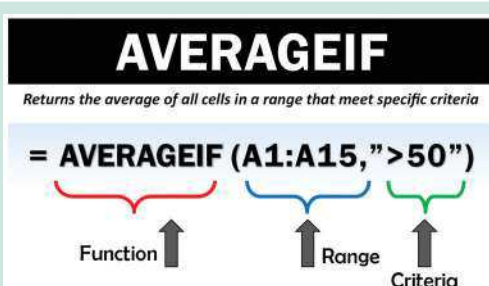


AVERAGE A spreadsheet function. Used to return the average (or arithmetic mean) of a range of numbers.

See [function](#); [spreadsheet](#)



AVERAGEIF A spreadsheet function. Used to return the average (or arithmetic mean) of a range of numbers based on specific criteria given to the function. For example, in a range of numbers, one can work out the average of all numbers that are over a particular number. Example: =AVERAGEIF(A1:A10,">400") means the average of all numbers bigger than 400 from cells A1 to A10 is calculated.



See [cell](#)

AVG The same purpose as the AVERAGE function in Microsoft Excel. This is used in Microsoft Access reports and queries to calculate the average of data contained in a specified set of fields.

See [data](#)

AVI (Audio Video Interleave) This is Microsoft's official video standard for the Windows platform. This format of video was developed by Microsoft for the storing of video and audio information in a file. However, these files have limitations because they have a resolution of 320 x 240 pixels and a maximum file size of 2 GBs.

See [gigabyte](#); [pixels](#)