



Tech Mega Trends and AI

Cloud Computing

Using computers, storage, and software over the internet instead of on your own machine.

Example: Saving your photos in Google Photos instead of only on your phone's hard drive.

Memory trick: think "someone else's computer, rented over the internet."

Internet of Things (IoT)

Everyday physical objects connected to the internet so they can send and receive data.

Example: A smart thermostat that adjusts the temperature based on whether you're home.

Memory trick: "things" (fridges, watches, lights) that talk to the internet.

Privacy-Enhancing Technologies (PETs)

Tools and techniques designed to protect personal data while it's being collected, shared, or analysed.

Example: A hospital sharing patient data for research after removing names and IDs so no one can be identified. Memory trick: "privacy shields" for your data.

Edge Computing

Processing data close to where it's created (on a local device) instead of sending it far away to a central data centre.

Example: A self-driving car analysing camera footage in the car itself, so it can react instantly instead of waiting for the cloud. Memory trick: computing happens at the "edge" of the network, near the user.

Autonomous Weapons

Weapons systems that can select and engage targets with little or no human control.

Example: A drone programmed to identify and strike a target on its own, without a person pulling the trigger. Memory trick: "robot soldier" that decides for itself.

Blockchain

A digital record-keeping system where information is stored in linked blocks across many computers, making it very hard to alter after the fact.

Example: Bitcoin transactions are recorded on a blockchain so everyone can verify them, but no single person can secretly change them. Memory trick: a "digital chain of receipts" everyone can see.

Computer Vision

A field of AI that trains computers to identify and understand objects, people, or scenes in images and video.

Example: Your phone unlocking by recognizing your face. Memory trick: giving computers "eyes" that can understand what they see.

Augmented Reality (AR)

Technology that overlays digital images or information onto the real world, usually through a camera or screen.

Example: A Snapchat filter adding dog ears to your face in real time. Memory trick: AR "adds" a digital layer on top of the real world.

Virtual Reality (VR)

A fully digital, computer-generated environment that you experience through a headset, replacing the real world around you.

Example: Putting on a VR headset to explore a 3D roller coaster ride while sitting in your living room. Memory trick: VR "replaces" reality completely.

The Metaverse

A broad idea of connected virtual worlds where people can meet, work, play, and interact using avatars, often combining VR, AR, and other technologies.

Example: Attending a virtual concert with friends as avatars in a shared 3D online space. Memory trick: the "internet you can walk around in."