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Technical Terms for AI & Technology Essays

Confident English. Powerful Results.

Thirty-five terms for A-Level General Paper essays and Application Questions on technology. Precise vocabulary earns language marks — but only when the idea underneath it is argued.

Developments & Features

What the technology is and does.

- **Algorithm** — a set of rules or instructions a computer follows.
- **Machine Learning** — a system that improves itself by learning from data.
- **Neural Networks** — computer systems modelled on the human brain.
- **Automation** — technology performing tasks with little or no human input.
- **Big Data** — massive amounts of information processed for insights.
- **Natural Language Processing (NLP)** — AI's ability to understand human language.
- **Generative AI** — AI that creates new content — text, images, music.
- **Deep Learning** — advanced machine learning using many layers of neural networks.
- **Augmented Reality (AR)** — overlaying digital information onto the real world.
- **Virtual Reality (VR)** — fully computer-generated environments for interaction.
- **Blockchain** — decentralised digital ledger technology.
- **Internet of Things (IoT)** — everyday objects connected to the internet, exchanging data.

Benefits & Advantages

The case in favour — use these to build, not decorate.

- **Efficiency** — faster completion of tasks with fewer resources.
- **Productivity Gains** — increased output due to automation.
- **Innovation** — creation of new products, services or ideas.
- **Personalisation** — tailoring services or products to individual needs.
- **Data-Driven Decision Making** — using evidence from data instead of guesswork.
- **Scalability** — technology's ability to expand quickly and handle growth.
- **Cost Reduction** — lowering expenses by replacing repetitive human labour.
- **Accessibility** — making information, services or education available to more people.
- **Global Connectivity** — linking people worldwide through digital platforms.
- **Sustainability Solutions** — technology used to reduce waste, energy use or environmental impact.
- **Enhanced Accuracy** — fewer human errors due to the precision of technology.

Disadvantages & Risks

The counterargument an A-grade essay must weigh.

■ **Bias in AI** — unfair outcomes due to flawed or skewed data.

■ **Job Displacement** — workers losing jobs to automation.

■ **Ethical Concerns** — moral issues about privacy, bias or misuse.

■ **Surveillance** — monitoring people through technology, raising privacy fears.

■ **Cybersecurity Threats** — risks of hacking, fraud or data leaks.

■ **Digital Divide** — the gap between those with and without access to technology.

■ **Overdependence on Technology** — loss of skills or critical thinking when machines do too much.

■ **Privacy Invasion** — personal data collected or exposed without consent.

■ **Algorithmic Transparency** — lack of clarity about how AI reaches its decisions.

■ **Technological Unemployment** — long-term job loss caused by machines.

■ **Addiction to Technology** — overuse of digital devices affecting health and relationships.

■ **Loss of Human Agency** — relying so heavily on technology that independent decision-making erodes.

USING THESE TERMS WELL

A term names an idea. Marks come from arguing it.