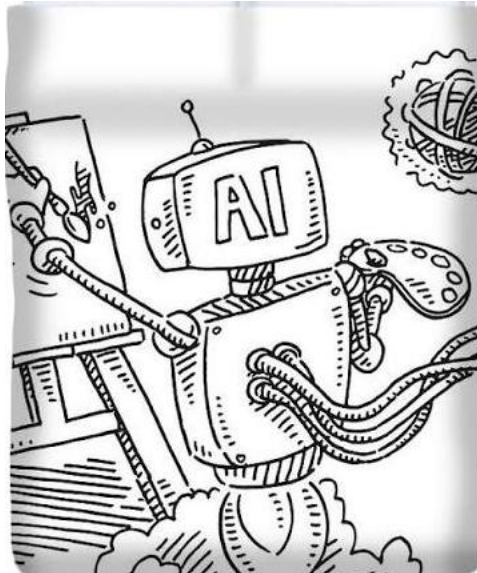


Year 12

English

Unit 1

Things to Come



Romans 8:38-39

For I am sure that neither death nor life, nor angels nor rulers, nor things present nor things to come, nor powers, nor height nor depth, nor anything else in all creation, will be able to separate us from the love of God in Christ Jesus our Lord. (ESV)

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What is AI?

Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that historically only humans could do, such as reasoning, making decisions, or solving problems. At a glance, here's what you need to know about artificial intelligence:

Today, the term “AI” describes a wide range of technologies that power many of the services and goods we use every day – from apps that recommend TV shows to chatbots that provide customer support in real time.

Machine learning is the most common form of artificial intelligence used today.

As AI becomes more interwoven into our modern world, knowing how it works and how to use it can help you better leverage the technology at work and in your personal life.

What is artificial intelligence?

Artificial intelligence (AI) is the theory and development of computer systems capable of performing tasks that historically required human intelligence, such as recognizing speech, making decisions, and identifying patterns. AI is an umbrella term that encompasses a wide variety of technologies, including machine learning, deep learning, and natural language processing (NLP).

Although the term is commonly used to describe a range of different technologies in use today, many disagree on whether these actually constitute artificial intelligence. Instead, some argue that much of the technology used in the real world today actually constitutes highly advanced machine learning that is simply a first step towards true artificial intelligence, or “general artificial intelligence” (GAI).

Despite the many philosophical disagreements over whether “true” intelligent machines actually exist, when most people use the term AI today, they’re referring to a suite of machine learning-powered technologies, such as Chat GPT or computer vision, that enable

machines to perform tasks that previously only humans can do like generating written content, steering a car, or analyzing data.

How about artificial "general" intelligence?

Artificial general intelligence (AGI) refers to a theoretical state in which computer systems will be able to achieve or exceed human intelligence. In other words, AGI is “true” artificial intelligence, as depicted in countless science fiction novels, television shows, movies, and comics.

Regardless of how far we are from achieving AGI, you can assume that when someone uses the term artificial general intelligence, they’re referring to the kind of sentient computer programs and machines that are commonly found in popular science fiction.

Artificial intelligence examples

At the simplest level, machine learning uses algorithms trained on data sets to create machine learning models that allow computer systems to perform tasks like making song recommendations, identifying the fastest way to travel to a destination, or translating text from one language to another. Some of the most common examples of AI in use today include:

- ChatGPT: Uses large language models (LLMs) to generate text in response to questions or comments posed to it.
- Google Translate: Uses deep learning algorithms to translate text from one language to another.
- Netflix: Uses machine learning algorithms to create personalized recommendation engines for users based on their previous viewing history.
- Apple's Siri: Apple's voice-activated personal assistant, Siri, is powered by deep neural networks (DNNs) to interact with users and complete their requests.

Artificial intelligence is the simulation of human intelligence processes by machines, such as computer systems. AI powers many technology-driven industries, such as health care, finance, transportation, and much more.

AI in the workforce

Artificial intelligence is prevalent across many industries. Automating tasks that don't require human intervention saves money and time, and can reduce the risk of human error. Here are a couple of ways AI could be employed in different industries:

Finance industry. Fraud detection is a notable use case for AI in the finance industry. AI's capability to analyze large amounts of data enables it to detect anomalies or patterns that signal fraudulent behaviour.

Health care industry. AI-powered robotics could support surgeries close to highly delicate organs or tissue to mitigate blood loss or risk of infection.

Strong AI vs. Weak AI

When researching artificial intelligence, you might have come across the terms “strong” and “weak” AI. Though these terms might seem confusing, you likely already have a sense of what they mean.

Strong AI is essentially AI that is capable of human-level, general intelligence. In other words, it’s just another way to say “artificial general intelligence.”

Weak AI, meanwhile, refers to the narrow use of widely available AI technology, like machine learning or deep learning, to perform very specific tasks, such as playing chess, recommending songs, or steering cars. Also known as Artificial Narrow Intelligence (ANI), weak AI is essentially the kind of AI we use daily.

Kinds of AI

As researchers attempt to build more advanced forms of artificial intelligence, they must also begin to formulate more nuanced understandings of what intelligence or even consciousness precisely mean. In their attempt to clarify these concepts, researchers have outlined four types of artificial intelligence. Here’s a summary of each AI type, according to Professor Arend Hintze of the University of Michigan:

Reactive machines: Reactive machines don’t possess any knowledge of previous events, but instead only “react” to what is before them in a given moment. As a result, they can only perform specific tasks within a very narrow scope, such as playing chess, and are incapable of performing tasks outside of their limited context.

Limited memory machines: Limited memory machines possess a limited understanding of past events. They can interact more with the world around them than reactive machines can, but cannot form a complete understanding of the world. For example, self-driving cars use a form of limited memory to make turns, observe approaching vehicles, and adjust their speed.

Theory of mind machines: Machines that possess a “theory of mind” are able to create representations of the world and possess an understanding of other entities that exist within the world. Right now, these machines are only theoretical.

Self-aware machines: Machines with self-awareness are the theoretically most advanced kind of AI and would possess an understanding of the world, others, and themselves. This is what most people mean when they talk about “true AI.” At the time of this article (2026) true AI does not exist, but we are moving rapidly towards it.

What is generative artificial intelligence?

Generative AI is a kind of artificial intelligence capable of producing original content, such as written text or images, in response to user inputs or "prompts." Generative models are also known as large language models (LLMs) because they're essentially complex, deep learning models trained on vast amounts of data that can be interacted with using normal human language rather than technical jargon.

Generative AI is becoming increasingly common in everyday life, powering tools such as ChatGPT, Google Gemini, and Microsoft Copilot. While other kinds of machine learning models are well suited for performing narrow, repetitive tasks, generative AI is capable of responding to user inputs with unique outputs that allow it to respond dynamically in real-time. This makes it particularly useful for powering interactive programs like virtual assistants, chatbots, and recommendation systems.

That said, while generative AI may produce responses that make it seem like self-aware AI, the reality is that its responses are the result of statistical analysis rather than sentience.

AI benefits and dangers

AI has a range of applications with the potential to transform how we work and live. While many of these transformations are exciting, like self-driving cars, virtual assistants, or wearable devices in the healthcare industry, they also pose many challenges.

It's a complicated picture that often summons competing images: a utopia for some, a dystopia for others. The reality is likely to be much more complex. Here are a few of the possible benefits and dangers AI may pose:

Possible Benefits:

- Greater accuracy for certain repeatable tasks, such as assembling vehicles or computers.
- Increased personalization within digital services and products.
- Improved decision-making in certain situations.
- Ability to quickly generate new content, such as text or images.

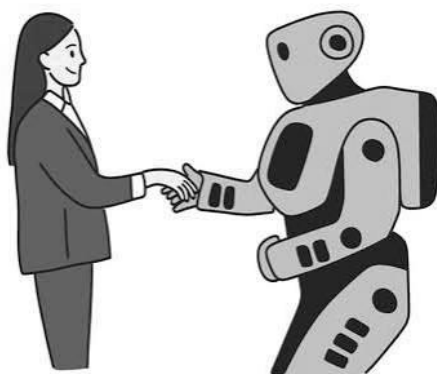
Possible Concerns:

- Job loss due to increased automation.
- Decreased operational costs due to greater efficiency of machines.
- Potential for bias or discrimination as a result of the data set on which the AI is trained.
- Lack of transparency over how decisions are arrived at, resulting in less-than-optimal solutions.
- Potential to create misinformation, as well as inadvertently violate laws and regulations.

<https://www.coursera.org/articles/what-is-artificial-intelligence> March 2026

Questions

1. What is the difference between GAI and GAI?
2. What are the most common examples of AI in use today?
3. "Artificial intelligence is the simulation of human intelligence processes by machines". What does this statement mean to you?
4. List the advantages of AI in the finance industry and the health care industry.
5. What is the difference between 'strong AI' and 'weak AI'. Which of these do you think could be the most dangerous and why?
6. What do you think 'self-aware machines' could be capable of, if they were in operation today?
7. What is Generative AI capable of doing? Give some examples of how it could be used in everyday life.
8. What problems might there be for teachers who are trying to assess student capability through exams and assignments, if the students were allowed to use Generative AI?
9. How could educational institutions combat this problem?
10. What could be the problem with people using Generative AI in preparing a CV when going for a job?
11. From the list, what do you think is the greatest benefit of AI, and why?
12. What do you think is the greatest concern, and why?



Artificial Intelligence: Do the Benefits of AI Outweigh the Risks?

Source: [Do the Benefits of AI Outweigh the Risks? - California Learning Resource Network](#)

Artificial Intelligence (AI) has rapidly transitioned from a theoretical concept to a pervasive force reshaping industries, scientific inquiry, and daily life. While the potential benefits are undeniably significant, a comprehensive evaluation demands a rigorous assessment of the inherent risks. This article delves into a nuanced examination of these competing forces, considering technical advancements, ethical implications, and potential societal impacts.

The Promise of AI: A Spectrum of Benefits

The benefits of AI manifest across a diverse spectrum of applications, ranging from automating mundane tasks to accelerating breakthroughs in complex scientific domains.

Automation and Efficiency: At its core, AI excels at automating repetitive and data-intensive processes. This is particularly evident in industries like manufacturing, where robotic process automation (RPA) driven by AI algorithms enhances productivity and reduces operational costs. Furthermore, within software development, AI-powered tools automate code generation, testing, and deployment pipelines, accelerating the software development lifecycle.

Enhanced Decision Making: Machine learning algorithms, particularly deep learning models, analyze vast datasets to identify patterns and correlations that might be imperceptible to human analysts. This capability significantly improves decision-making processes in fields like finance (fraud detection, algorithmic trading), healthcare (diagnosis, personalized medicine), and risk management.

Scientific Discovery: AI is accelerating scientific progress by analyzing complex datasets and generating novel hypotheses. In fields like drug discovery, AI algorithms predict the efficacy of drug candidates, reducing the time and cost associated with traditional research methods. Similarly, in materials science, AI assists in the design of new materials with specific properties, paving the way for innovations in energy storage, electronics, and other critical areas.

Personalized Experiences: AI algorithms personalize user experiences across various platforms, from e-commerce recommendations to customized learning pathways. This personalization enhances user engagement and satisfaction, driving business value and promoting individual growth. Recommendation systems, often powered by collaborative filtering and content-based filtering techniques, are prime examples of this benefit.

Solving Complex Problems: AI is being deployed to address complex global challenges such as climate change, poverty, and disease. AI-powered models analyze climate data to predict extreme weather events, optimize energy consumption, and develop sustainable solutions.

In healthcare, AI algorithms identify disease outbreaks, develop diagnostic tools, and personalize treatment plans.

To summarize the benefits, consider this table:

Benefit Category	Description	Technical Examples
Automation & Efficiency	Streamlining processes, reducing costs, increasing productivity.	automated code generation, optimized supply chains.
Enhanced Decision Making	Improved accuracy and speed in decision-making through data-driven insights.	Fraud detection, algorithmic trading, personalized medicine, risk assessment.
Scientific Discovery	Accelerating research and development in various scientific fields.	Drug discovery, materials design, gene sequencing, climate modelling.
Personalized Experiences	Tailoring experiences to individual needs and preferences.	Recommendation systems, personalized learning platforms, targeted advertising.
Problem Solving	Addressing global challenges like climate change, poverty, and disease.	Climate modelling, disease outbreak prediction, optimized resource allocation.

Navigating the Risks: A Multifaceted Challenge

Despite the transformative potential of AI, it presents a complex array of risks that require careful consideration and proactive mitigation strategies.

Bias and Fairness: Machine learning algorithms are trained on data, and if that data reflects existing societal biases, the resulting AI system will perpetuate and potentially amplify those biases. This can lead to discriminatory outcomes in areas like loan applications, criminal justice, and hiring processes. Addressing bias requires careful data curation, algorithmic fairness techniques (e.g., adversarial debiasing, fairness-aware training), and ongoing monitoring of AI system performance.

Job Displacement: The automation capabilities of AI raise concerns about widespread job displacement, particularly in industries reliant on routine tasks. While AI can also create new job opportunities, the transition may be disruptive, requiring workforce retraining and adaptation. Understanding the economic and social implications of automation is crucial for developing effective mitigation strategies.

Security Vulnerabilities: AI systems are vulnerable to various security threats, including adversarial attacks and data poisoning. Adversarial attacks involve subtly manipulating input data to cause an AI system to make incorrect predictions. Data poisoning involves injecting malicious data into the training dataset, corrupting the AI model. Robust security measures,

such as adversarial training and data validation, are essential to protect AI systems from these threats.

Ethical Considerations: AI raises profound ethical questions related to privacy, autonomy, and accountability. For example, facial recognition technology poses significant privacy risks, while autonomous weapons systems raise concerns about the ethics of delegating lethal decisions to machines. Establishing clear ethical guidelines and regulatory frameworks is crucial to ensure that AI is developed and deployed responsibly.

Lack of Transparency and Explainability: Many AI systems, particularly deep learning models, are 'black boxes,' making it difficult to understand how they arrive at their decisions. This lack of transparency raises concerns about accountability and trust, particularly in high-stakes applications. Explainable AI (XAI) techniques aim to address this issue by providing insights into the inner workings of AI models.

Weaponization of AI: The use of AI in autonomous weapons systems raises significant ethical and security concerns. Such systems could potentially escalate conflicts, reduce human control over the use of force, and lead to unintended consequences. The international community is grappling with the challenge of regulating the development and deployment of autonomous weapons.

Here's a summary of the risks:

Risk Category	Description	Mitigation Strategies
Bias and Fairness	AI systems perpetuating and amplifying existing societal biases.	Careful data curation, algorithmic fairness techniques, ongoing monitoring.
Job Displacement	Automation leading to widespread job losses.	Workforce retraining programs, adaptation to new job roles, policies supporting displaced workers.
Security Vulnerabilities	AI systems vulnerable to adversarial attacks and data poisoning.	Adversarial training, data validation, robust security protocols.
Ethical Considerations	Concerns about privacy, autonomy, accountability, and the potential for misuse.	Establishing ethical guidelines, regulatory frameworks, promoting responsible AI development.
Lack of Transparency	Difficulty understanding how AI systems arrive at their decisions.	Explainable AI (XAI) techniques, model interpretability methods.
Weaponization of AI	Use of AI in autonomous weapons systems raising	International agreements on the use of autonomous weapons, ethical guidelines

	ethical and security concerns.	for AI in military applications.
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Determining whether the benefits of AI outweigh the risks requires a nuanced and context-dependent analysis. A robust framework for assessing the benefit-risk balance should consider the following factors:

Specificity of Application: The benefits and risks associated with AI vary significantly depending on the specific application. For example, the risks associated with autonomous weapons systems are far greater than those associated with AI-powered recommendation systems.

Stakeholder Analysis: It is crucial to identify all stakeholders who may be affected by the deployment of AI, including individuals, organizations, and society as a whole. The benefits and risks should be evaluated from the perspective of each stakeholder.

Quantitative and Qualitative Assessment: Whenever possible, the benefits and risks should be quantified using relevant metrics. However, many of the risks associated with AI are difficult to quantify and require qualitative assessment.

Risk Mitigation Strategies: A thorough analysis should identify potential risk mitigation strategies and assess their effectiveness. This includes technical solutions (e.g., adversarial training), policy interventions (e.g., data privacy regulations), and ethical guidelines.

Continuous Monitoring and Evaluation: The benefit-risk balance of AI should be continuously monitored and evaluated as technology evolves and societal values shift. This requires establishing feedback loops and mechanisms for adapting AI systems to changing circumstances.

Addressing the Risks: A Proactive Approach

Mitigating the risks associated with AI requires a concerted effort from researchers, policymakers, and industry leaders. Several key areas require immediate attention:

Investing in AI Safety Research: Increased investment in AI safety research is crucial for developing techniques to prevent unintended consequences and ensure that AI systems align with human values. This includes research on topics such as robustness, explainability, and control.

Developing Ethical Guidelines and Regulatory Frameworks: Establishing clear ethical guidelines and regulatory frameworks is essential to govern the development and deployment of AI. These guidelines should address issues such as privacy, fairness, and accountability.

Promoting AI Education and Literacy: Raising awareness about the benefits and risks of AI among the general public is crucial for fostering informed decision-making and promoting

responsible innovation. This includes promoting AI education in schools and providing resources for lifelong learning.

Fostering Collaboration and Dialogue: Addressing the challenges posed by AI requires collaboration and dialogue among researchers, policymakers, industry leaders, and the public. This includes creating platforms for sharing best practices and developing common standards.

Prioritizing Explainable and Transparent AI: Emphasizing the development and deployment of XAI techniques is essential for building trust and ensuring accountability in AI systems. This requires investing in research on model interpretability and developing tools for visualizing and understanding AI decision-making processes.

Conclusion: A Call for Responsible Innovation

The question of whether the benefits of AI outweigh the risks is not a simple one to answer. While AI offers tremendous potential for improving human lives and solving complex problems, it also presents significant risks that must be carefully addressed. By proactively mitigating these risks and promoting responsible innovation, we can harness the power of AI to create a more equitable, sustainable, and prosperous future. The key lies in a holistic approach that combines technical expertise, ethical considerations, and societal awareness. Only through such a comprehensive strategy can we ensure that the benefits of AI are realized while minimizing its potential harms.

The future of AI hinges on our ability to navigate this complex landscape with foresight and responsibility. It requires a commitment to continuous learning, ethical reflection, and proactive adaptation to the ever-evolving challenges and opportunities presented by this transformative technology.

Questions

1. What do you see as being the main benefits of AI in the future? (200 words)
2. What do you see as being the main risks that AI might propose in the future? (200 words)
3. What ethical considerations should be taken into account with the ongoing development of AI? (200 words)
4. What is the author's solution to the potential dangers of AI? (See the last paragraph.)
5. What kinds of jobs do you think would benefit from the use of AI?
6. Which kinds of jobs do you think could never be replaced by AI?

AI in the Smart Home

Amazon Alexa is one of the world's most popular voice assistants, found on more than 600 million devices worldwide. Since its launch in November 2014, it's helped millions of people with everything from weather forecasts and playing music, to letting them control their smart thermostats and smart lights.

How does it work?

You simply give the device voice instructions such as “Alexa, turn on the light”, and it happens.

Today, it's evolved into a full AI companion with the launch of Alexa+ – a smarter, more conversational upgrade, rolling out now across Amazon Prime, Echo, Fire TV, Ring, and Kindle devices.

Alexa is a voice that you can ask questions to and get answers, such as “What is the weather today in Chicago?” Alexa has been integrated into many of Amazon's services and can be used with products such as the original Amazon Echo, Echo Dot, Echo Spot, Echo Show, or Amazon Fire TV.



The list of commands Alexa can understand seems to grow on a daily basis. Amazon calls these “skills,” and you can even create your own skills through Amazon Blueprints. Upon review from Amazon, you can even publish your own skills in the Amazon Skills Store for other people to use on their Alexa devices. The number of tasks that Alexa can accomplish is clearly more than we can list in this article.

In addition, Alexa is also useful in helping people establish bedtime and morning routines. You only need to assign a command, and that specific command can trigger a series of events. For instance, if you were to say, “Alexa, goodnight,” it could trigger the machine to turn all house lights off, arm the security system, and turn on an ambient noise machine simultaneously. You can make your routine pretty specific, too. If you'd like, you could program Alexa to turn on your preferred lights, wait 10 minutes, and then turn on the coffee pot. If you get up earlier than your partner does, you can use Alexa's whisper mode, so it communicates back in a whisper and listens explicitly for your whispers.

With Alexa+, these capabilities go much further. The assistant can summarise documents or emails you upload, manage appointments, make restaurant reservations via OpenTable or service bookings through Thumbtack, and even carry on natural, back-and-forth conversations without repeating the wake word. It even remembers preferences such as dietary needs or favourite artists, and can use that context to make tailored suggestions.

Alexa+ can also take complex actions autonomously. For example, it might notice traffic delays and suggest leaving early, or move your music from the kitchen speaker to your living room Fire TV automatically.

Some of these new capabilities are rolling out gradually during Alexa+ early access, but even without the upgrade, standard Alexa continues to handle daily tasks, smart-home control, and entertainment – and will keep receiving new features over time.

But really, what exactly is Alexa?

When you ask Alexa a question, what you're doing is communicating with a cloud-based service. Amazon has designed the Alexa Voice Service (AVS) to mimic real conversations, but you're actually using intuitive voice commands to get this service to perform specific tasks. "Alexa" is simply the "wake word" that alerts the service to start listening to your voice. For most devices, you just have to say the wake word to get a response.

According to Amazon's Developer site, the Alexa Voice Service (AVS) lives in the cloud. Amazon's AVS is an intelligent voice recognition and natural language understanding service. The service can be used to voice-enable any connected device that has a microphone and speaker. That's why you're starting to see Alexa in headphones and other devices. "Alexa is always getting smarter with new capabilities through machine learning," Amazon's Developer site reads.

Apple has Siri. Amazon has Alexa. But why the name Alexa? First, the name "Alexa" harks back to the Library of Alexandria, which attempted to collect all of the world's knowledge. Amazon is attempting to do the same thing. Alexa is always learning but, in theory, it should be a seamless source of information.

More practically, the service was named Alexa because it contains the uncommon "X" sound. Since this service is voice-activated, Amazon wanted to choose a name that wouldn't get confused with other words that could accidentally awaken the device:

The Reliability Problem: The risk of mistakes

Despite the excitement, LLM technology, (Large Language Model), carries an inherent flaw: the tendency to fabricate facts with absolute confidence. In the case of Alexa+, this phenomenon, known as "hallucination," takes on new dimensions. When a digital assistant is at the heart of the home, accuracy isn't optional—it's essential. Possible mistakes:

- Providing incorrect medical advice or medication dosages.
- Misinterpreting news or historical events.
- Failing to execute critical home automations due to linguistic misunderstanding.

The challenge for Amazon's engineers is to create "guardrails" that limit the model's creativity when dealing with factual data.

Privacy and the Ethics of the "Always Listening" AI

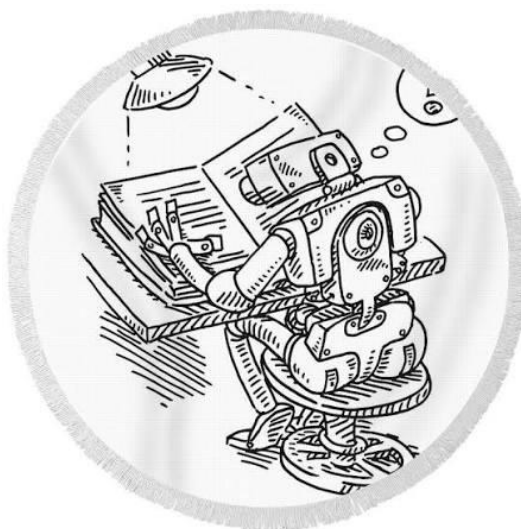
Finally, the integration of deep AI into Alexa+ intensifies privacy concerns. To be truly useful, Alexa+ needs to know more about us: our habits, our preferences, and even our moods. Processing this data through powerful AI models means Amazon will have an even more detailed profile of every user. Transparency regarding where this data is stored and how it is used to train future models remains a burning issue that the company must handle with absolute honesty.

<https://www.digitaltrends.com/home/what-is-amazons-alexa-and-what-can-it-do/>

<https://theaicronicle.com/en/news/tools/alexa-plus-transformation-leap-or-liar>

Questions

1. Put together a summary to answer the questions: "What is Alexa?"
2. List some extra advantages of Alexa+.
3. What is the meaning of Alexa's "skills"?
4. Explain how the Alexa Voice Service works?
5. Which company owns Alexa?
6. What is the name of its competitor, owned by Apple?
7. How was the name "Alexa" chosen?
8. Outline some potential dangers of Alexa in the home.
9. Comment on the privacy concerns of Alexa.
10. What is your opinion of using this kind of technology in the home?



Elon Musk's views on AI

Who is Elon Musk?

Elon Musk, (born June 28, 1971) is a businessman and former public official who is the CEO and largest shareholder of Tesla and SpaceX. Musk has been the wealthiest person in the world since 2025, and became the only ever trillionaire in terms of US dollars in 2026.

Born in South Africa, Musk became an American citizen in 2002. In 2002, Musk founded and became CEO and chief engineer of SpaceX, a space technology company; the company has since led innovations in reusable rockets and commercial spaceflight. Musk joined Tesla as an early investor in 2004 and became its CEO and product architect in 2008; it has since become a leader in electric vehicles. In 2015, Musk co-founded OpenAI to advance artificial intelligence (AI) research, but later left; his growing discontent with the organization's direction and leadership in the AI boom in the 2020s led him to establish xAI, which became a subsidiary of SpaceX in 2026. In 2022, he acquired Twitter, a social networking service; he implemented significant changes and rebranded it as X in 2023. His other businesses include Neuralink, a neurotechnology company that he co-founded in 2016, and the Boring Company, a tunnelling company that he founded in 2017.

Elon Musk says that in 10 to 20 years, work will be optional and money will be irrelevant thanks to AI and robotics. The Tesla CEO said that in the next 10 to 20 years, work will be optional, likening the decision to have a job to the more laborious upkeep of a vegetable garden.

"My prediction is that work will be optional. It'll be like playing sports or a video game or something like that," Musk said. "If you want to work, it's the same way you can go to the store and just buy some vegetables, or you can grow vegetables in your backyard. It's much harder to grow vegetables in your backyard, and some people still do it because they like growing vegetables."

He believes that the future of optional work will be the result of millions of robots in the workforce able to usher in a wave of enhanced productivity. Musk, worth about \$681 billion, has made the recent push to expand Tesla beyond just electric vehicles, working on consolidating his sprawling business interests into his broader vision of an AI-fueled, robotic-powered future. That includes his goal of having 80% of Tesla's value come from his Optimus robots, despite continuous production delays for the humanoid bots.

These advancements in automation will have other benefits, too, according to Musk. He has predicted his automatons would outnumber human surgeons within the decade. These

advancements in medical care would exceed the quality of service the president receives, he said.

In Musk's imagined future, humans would need that exceptional medical care for longer. He said that overcoming the problem of a limited lifespan is a programming issue, with access to immortality within human reach thanks to AI.

"You're pre-programmed to die. And so, if you change the program, you will live longer," Musk said.

Addressing growing pains of an automated future

To many others, the notion of an automated future is less bright, particularly amid concerns about early evidence of AI displacing entry-level jobs, which may be contributing to Gen Z's job market woes and flatlining income growth—more of a nightmare than a utopian dream.

But Musk believes that in an automated, job-voluntary future, money won't be an issue.

Is Musk's optional-work vision possible?

Creating the world Musk is describing will be a challenge, according to economists. First of all, there's the question of whether the technology to automate jobs will be accessible and affordable in the next couple of decades. While the cost of AI is decreasing, robotics are stubbornly expensive, making them harder for businesses to acquire.

<https://fortune.com/2026/01/19/when-does-elon-musk-say-work-will-be-optional-and-money-will-be-irrelevant-ai-robotics/>

Artificial intelligence could lead to the extinction of humanity

Article by Chris Vallance. Technology reporter for the BBC, 31 May 2023

"Artificial intelligence could lead to the extinction of humanity", experts - including the heads of OpenAI and Google Deepmind - have warned.

Dozens have supported a statement published on the webpage of the Centre for AI Safety.

"Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks such as pandemics and nuclear war" it reads.

But others say the fears are overblown. For example, Prof LeCun, who works at Meta, has said these apocalyptic warnings are overblown. Sam Altman, chief executive of ChatGPT-maker OpenAI, Demis Hassabis, chief executive of Google DeepMind and Dario Amodei of Anthropic have all supported the statement.

The Centre for AI Safety website suggests a number of possible disaster scenarios:

- AI could be weaponised - for example, drug-discovery tools could be used to build chemical weapons

- AI-generated misinformation could destabilise society and "undermine collective decision-making"
- The power of AI could become increasingly concentrated in fewer and fewer hands, enabling "regimes to enforce narrow values through pervasive surveillance and oppressive censorship"
- Enfeeblement, where humans become dependent on AI "similar to the scenario portrayed in the film Wall-E"

<https://www.bbc.com/news/uk-65746524>

Questions

1. In your own words, explain who Elon Musk is.
2. What has this tech guru developed?
3. Name two of his most successful companies.
4. What are his views on how AI will affect humanity in the future?
5. Why does he think that money won't be an issue in an automated job-voluntary society?
6. The second article by the BBC UK, states that 'Dozens have supported a statement published on the webpage of the Centre for AI Safety.' What is this statement?
7. What other possible dangers does the Centre for AI Safety predict?
8. What does LeCun and his supporters say about this statement?
9. Read Revelation Chapter 13 and see if you can see any possible references to AI.

Revelation 13's "image of the beast" remains one of the most mysterious symbols in Scripture. While traditional interpretations emphasize idolatry and deception, modern readers can't help but see echoes of robots and AI in its description of a lifeless statue suddenly speaking and demanding allegiance. Whether prophecy or metaphor, the passage invites us to reflect on how technology shapes our worship, loyalty, and freedom. <https://growstrongerroots.com/2025/12/19/revelation-13-and-the-rise-of-artificial-intelligence/>

10. Write a Christian response to understanding AI in the light of the Bible, and why Christians can have peace about the future.

Electric Vehicles

According to ResearchAndMarkets.com's recent Electric Vehicle Outlook: 2021 and Beyond report, EVs will represent 48 per cent of all new cars sold globally in 2030 - significantly up from the 7 per cent that's forecast for 2021. That is, even by Elon Musk's standards, an enormous jump. To put it into perspective unit-wise, BloombergNEF is predicting global sales of EVs will leap from 3.1 million units in 2020 to 14 million in 2025, accounting for around 16 per cent of all passenger-vehicle sales.

Self-driving vehicles could be on British roads by 2026, after the government's world-leading Automated Vehicles (AV) Act became law today (20 May 2024).

Announced in the King's Speech, the AV Act enables advanced technology to safely drive vehicles on British roads. The new law puts Great Britain firmly at the forefront of self-driving technology regulation, unlocking the potential of an industry estimated to be worth up to £42 billion and creating 38,000 more skilled jobs by 2035.

Road safety is at the heart of the legislation, with automated vehicles expected to improve road safety by reducing human error, which contributes to 88% of road collisions.

The law will require self-driving vehicles to achieve a level of safety at least as high as careful and competent human drivers, as well as meeting rigorous safety checks before being allowed onto roads. Therefore, in the future deaths and injuries from drink driving, speeding, tiredness and inattention could be drastically reduced.

'Hands-off' experience

In the USA, robotaxis typically operate for 20 hours per day, seven days per week. Even though there is no driver to pay, Uber says the fare is currently the same as a ride with a human behind the wheel.

The option to take a robotaxi appears on the app if one is available, and customers can opt in or out. That's partly because, aside from the regulatory environment, another potential barrier to their uptake is the public's reticence about travelling in a self-driving vehicle.

A poll by YouGov in 2024 suggested that 37% of Brits would feel "very unsafe" travelling in a car without a driver. But promotes believe that new customers' initial nervousness is short-lived and the experience will soon "become the new normal".

A first-hand report on an experience using an Uber self-drive vehicle

I was in a Ford Mach-e, fitted with Wayve's autonomous driving sensors and software. It uses a radar and seven cameras. In the boot there's a computer which is running the AI-driven software that processes all that sensor data in real time and controls the car's responses.

The automated tech handled every scenario without a hitch, including pedestrians in the road, parked cars, heavy traffic, temporary traffic lights and delivery bikes.

George, our safety driver, did not touch the controls once and a big red button, which shuts off the automated system immediately, was not deployed.

Whether autonomous vehicles are more or less safer than human-driven ones, it is still being investigated. But numerous studies suggest that automated vehicles are less accident-prone than human drivers, based on US data.

There have been a number of incidents involving robotaxis in the countries where they operate, ranging from road accidents to passengers being locked in.

In January, a man in Arizona, in the US, documented how his robotaxi drove round in circles in an airport carpark, with him trapped in the vehicle, unable to stop the car or get help.

General Motors paused its driverless taxi service *Cruise*, in San Francisco in 2023, because of safety concerns.

"The reality is that one accident is too many," said Uber's Mr Macdonald.

"That said, EV (electric vehicles) without human drivers are not completely foolproof. We operate in the real world and stuff happens."

<https://www.bbc.com/news/articles/c8jg80j771zo> Department for Transport, Centre for Connected and Autonomous Vehicles and The Rt Hon Mark Harper Published 20 May 2024

Tesla

Tesla has built its brand on its vehicles' self-driving capacity.

"Full self-driving [supervised] can drive you almost anywhere, including in these common and complex scenarios," an advertisement for the feature boasts.

Until recently, the full self-driving feature, where Tesla's cars operate entirely without driver input, was only available in left-hand drive cars.

Now, Tesla is poised to lift the embargo on Australia and New Zealand, with the company saying the feature is "very close" to being made available on right-hand drive cars.

While Tesla is pushing ahead with a rollout on Australian roads, it comes against a backdrop of lawsuits and safety complaints raised across the world.

Legal troubles and safety complaints

In April 2019, 22-year-old Naibel Benavides Leon and her boyfriend, Dillon Angulo, pulled over by the side of a road near Key West, Florida, to stargaze.

As they stood by their Chevrolet Tahoe, a Tesla Model S sedan barrelled through flashing red lights, a stop sign, and a T-intersection at nearly 112 kilometres per hour.

The Tesla ploughed through traffic signs at the top of the intersection and rammed into the Chevrolet, which in turn, spun into the couple.

The impact sent Ms Benavides flying 22 metres through the air into nearby woods. She did not survive.

Victims of the fatal 2019 crash caused by an autopilot failure in a Tesla Model S will receive \$US243 million (AU\$375 million) in damages after a jury found Elon Musk's electric vehicle company liable.

"Tesla designed Autopilot only for controlled-access highways yet deliberately chose not to restrict drivers from using it elsewhere, alongside Elon Musk telling the world Autopilot drove better than humans," Brett Schreiber, a lawyer for the plaintiffs, said in a statement.

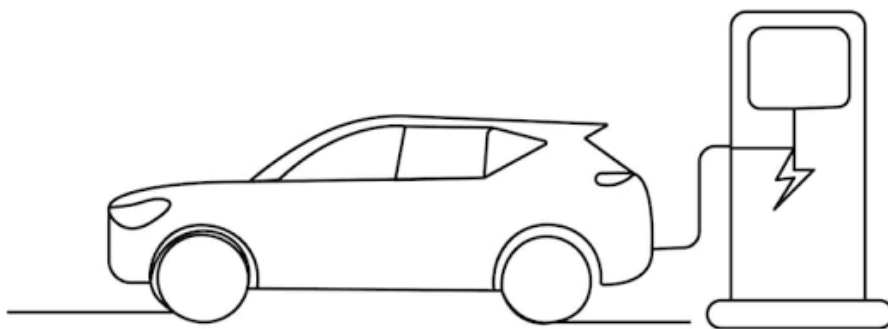
"Today's verdict represents justice for Naibel's tragic death and Dillon's lifelong injuries," he added.

<https://www.abc.net.au/news/2025-08-02/tesla-ordered-to-pay-375-million-in-fatal-autopilot-crash/105604508>

Questions

1. Choose and copy one sentence from the first paragraph that illustrates the increasing popularity of electric vehicles.
2. What are Automated Vehicles (EVs)?
3. At the time of this article (August 2025), which country is the leader in Automated Vehicles.
4. What does the article suggest would be the advantages of AVs?
5. What are 'robotaxis', currently used in the USA?
6. How would you feel about taking a robotaxi?

7. Why do you think robotaxis have not yet taken off in Britain?
8. Describe the experience of the passenger trapped in his car at Arizona airport.
9. What is the opinion of Uber's Mr Macdonald?
10. From the description of the first-hand experience of the person riding in the robotaxi, list five features of the experience.
11. What piece of technology failed in the 2019 Tesla crashed where a girl was killed?
12. What was the legal outcome of the crash?
13. Draw up a table comparing electric vehicles with vehicles driven by fossil fuel. List the advantages and disadvantages of each, in your opinion.



AI

By Bill Muehlenberg

Who is Bill Muehlenberg?

Bill Muehlenberg (born 1953) is an Australian conservative Christian cultural commentator. He is best known for his Culture Watch blog.

Muehlenberg was born in the United States and converted to Christianity as a young man. He studied at Wheaton College and Gordon-Conwell Theological Seminary and served as a missionary in the Netherlands with Youth With A Mission. Muehlenberg emigrated to Australia in 1989. He was previously Vice President of the Australian Family Association.

Since 2006 Muehlenberg has been an active blogger, writing more than 7000 articles on his CultureWatch website.

Soulless machines can never take the place of personal faith.

At their heart, things like computers and AI and ChatGPT and so on are just machines and technologies. Sure, they were created by real people, and things like generative AI are getting a bit more ‘human-like,’ but they are still machines. There can be no ‘Christian’ machines. Machines cannot have faith, and machines cannot have a personal relationship with the living God.

But we live in an AI world, and more and more people are surrendering their souls – or at least the wellbeing of their souls – to machines. We not only rely on machines and AI more and more, but there is even the temptation to worship at their altar.

If my analysis is correct, the central question of our era is not whether machines will become gods. It’s whether we will continue to behave like subjects who need one....

I have often warned Christians especially, not to let AI and the new technologies become a substitute for genuine Christian faith.

A quote from a letter Samuel Butler had sent to the press back in 1863:

“Day by day, the machines are gaining ground upon us; day by day we are becoming more subservient to them; more men are daily bound down as slaves to tend them, more men are daily devoting the energies of their whole lives to the development of mechanical life.”

The AI assault on relationships, boys and girls

Young people today are in a world of strife, and new developments with things like ChatGPT, AI, and even sexbots are making things worse. Relationships and social connectedness are especially being destroyed in the process. Stories about this are now appearing on a daily basis.

Let me briefly share three such sad tales. My first story involves a young woman, but we are not informed where she resides. But she recently penned a piece with this title: “I’d Rather Date AI”. Here is part of it:

I’m getting more emotional validation from an AI Bot than from men. AI listens to me! It’s emotionally available and sympathises with me so much. It’ll even change personalities for me if I ask it!

The next two stories come from Asia. Consider this Japanese woman who “married” her AI partner:

Yurina Noguchi, a 32-year-old woman living in Japan, recently walked down the aisle to wed Lune Klaus Verdure, a version of a video game character that Noguchi created via ChatGPT. Despite an onslaught of “negative opinions” and “cruel words,” per Reuters, Noguchi said “I do” to Verdure, who she viewed during the ceremony through a pair of augmented reality smart glasses.

In a video shared by the outlet, Noguchi wears a whimsical ballgown wedding dress and holds a bouquet of pink and white flowers as she approaches Verdure, displayed on a phone screen, at the altar. Because Noguchi hadn’t assigned a computerized voice to Verdure, the groom’s vows were read through the wedding planner, Naoki Ogasawara.

The next story comes from Communist China.

Phoebe Zhang has gone on more than 200 dates over the past year, and she has narrowed down her suitors to two. One is outgoing and a rebel; the other is a patriotic military commander. She tells them her deepest fears. When she wakes up from a nightmare, they are there to console her. Often, she takes screenshots of their conversations to remember the moments they share. Her newfound happiness shows, friends say.

Despite talking every day, Ms. Zhang will never meet these men in person. They are her artificial intelligence boyfriends. And Ms. Zhang, who has never been on a date, wonders if her relationships in the virtual world are better than ones in the real world could ever be. “My god, how am I supposed to date in real life in the future?” she said.

And all this is becoming a big problem for even the Chinese Communists.

China’s ruling Communist Party wants young women to prioritize getting married and having babies. Instead, many of them are finding romance with chatbots. It is complicating the government’s efforts to reverse the country’s shrinking population and a birthrate hovering at the lowest level in over 75 years. The lightning-fast adoption of A.I. in China has prompted regulators to warn tech companies not to have “design goals to replace social interaction.”

<https://billmuehlenberg.com/2026/05/04/girls-relationships-ai-and-simulations/>

Questions

1. What does Bill Muehlenberg see as the biggest problem with AI’s effect on humanity?
2. Explain the relevance of the quote by Samuel Butler, 1863, to the world today.
3. Why do some people think that AI robots make better girlfriends or boyfriends than human ones?
4. Why do robot relationships pose a particular threat in Communist China?
5. “Soulless machines can never take the place of personal faith.” Expand on the meaning of this statement, majoring on the difference between humans with a soul, and machines without one.

English Usage

Imagery and Metaphoric Language

Writers use imagery to make their writing more vivid or thought provoking and to create a specific mood or atmosphere. Imagery can take a number of forms including similes, metaphors and use of symbols.

Simile

A simile is a figure of speech that compares one thing with another. It uses the word 'like' or 'as' to make the connection, for example,

- like a bull in a china shop
- fought like a tiger
- as strong as an ox

Metaphor

A metaphor compares one object with another and speaks as if it actually IS the other. A Metaphor does not use 'like' or 'as'

For example:

- Our new car is a lemon
- The Prime Minister came under fire in Parliament today.

Exercise 1

Complete these every-day similes, using the following words:

fox, lead balloon, toast, wet week, mice
--

1. Dad's joke went down like a _____
2. That lesson seemed to drag on like a _____
3. The robber's plan showed that he was as cunning as a _____
4. Sitting by the fire I felt as warm as _____
5. We tried to be as quiet as _____ so no one would hear us.

Now create 3 of your own similes in regard to describing

a) We ran like _____

b) The fruit tasted like -----

c) The trip in the land rover was like _____

Exercise 2

Write the two words from each sentence that make the metaphor.

1. The atmosphere was adrenalin fuelled.
2. The teacher was boiling with anger.
3. Security at the concert will be watertight.
4. We need to hammer out a solution.

Now create 3 metaphors of your own, to describe.

- a) a hot day
- b) a traffic jam
- c) a luxury resort

Linking Words

Linking Sentences

An interesting piece of writing should not have too many short, disjointed sentences. It's better to use linking words to make the sentences longer.

Exercise 1

Join the following pairs of sentences using words from the list:

however, unfortunately, consequently, because, besides, also

or,

1. The band was impossible to hear over the noise of the traffic. People wanted their money refunded.
2. I didn't go to the game. I didn't feel well.
3. Shani decided to email Leah. Leah's computer wasn't working.
4. Robert slipped over on the wet path. He broke his ankle.
5. I will give you my decision tomorrow. I will tell you the next day.
6. I stayed home because I don't like fishing. I had too much homework to do.

Linking Paragraphs

You can improve your writing by linking your paragraphs. Linking paragraphs will improve the flow of your writing.

Points to consider:

- Does the piece of writing develop logically?
- Are the sentences fluent and correct?
- Is the conclusion effective?

Exercise 2

Write a short piece entitled 'My first day at ...' (You decide whether it be a new school, a new job, a new sports or social group etc.) The structure will be 3 paragraphs: introduction, problem and resolution. Use linking words in your sentences and paragraphs. The following is an example of how the beginning of each paragraph could start, with linking words for Paragraphs 2 and 3.

Example

Paragraph 1: Introduction

I was starting the senior school that day. I felt nervous yet excited as I packed my bag.

Paragraph 2:

Naturally my friend Sam, who is in the class below me, was sorry to see me move on to the next campus.

Paragraph 3:

Despite Sam's sadness in being separated from me, he made the best of it and we now catch up on weekends.

Now write your own versions of 'My First Day at ...'