

# Debating artificial intelligence

COMMUNICATION

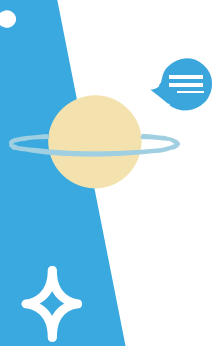
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Intermediate

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LANGUAGE  
English



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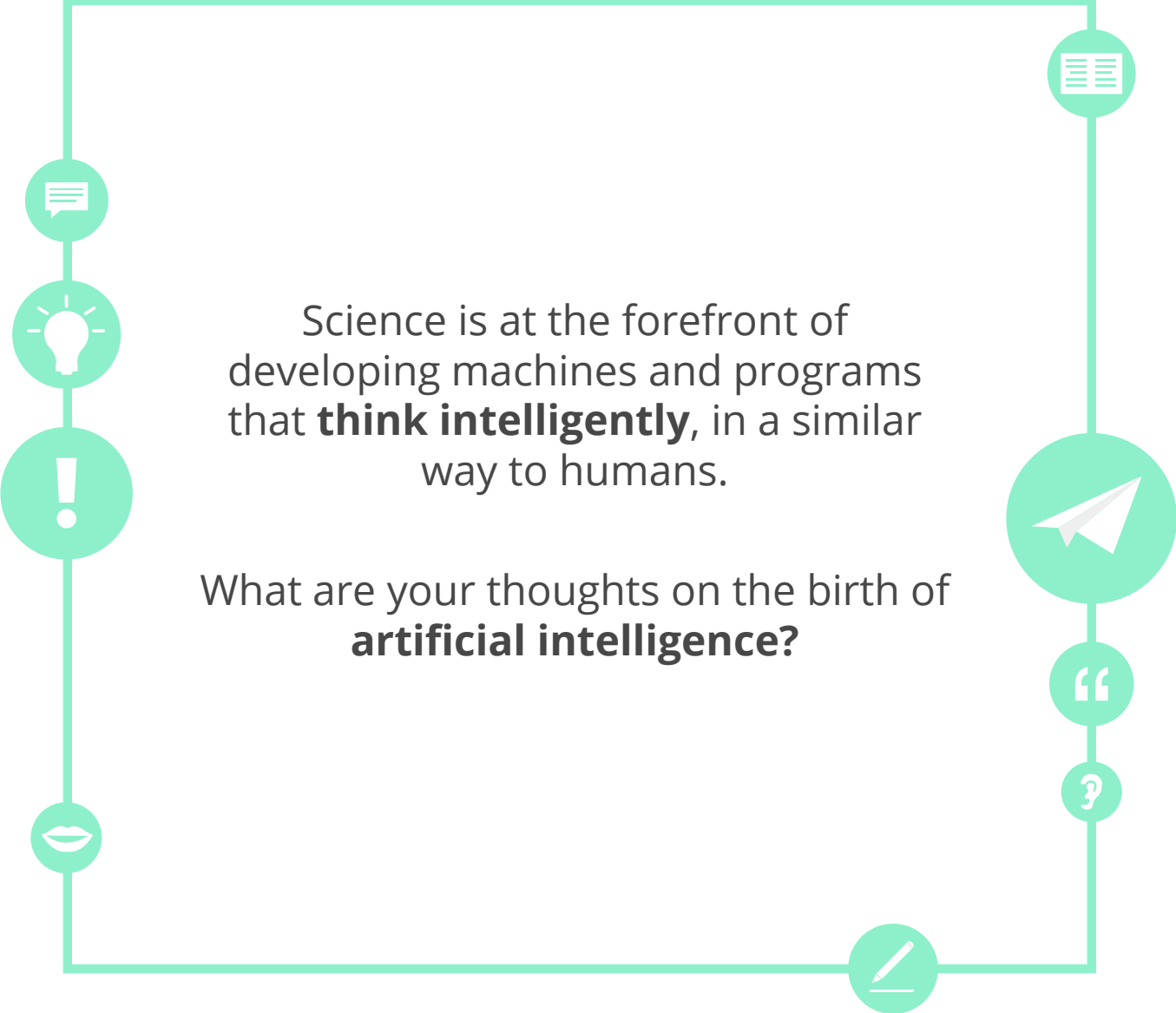




## Goals

- Can talk in detail about artificial intelligence and machine learning.
- Can clearly express my opinions about machines and their future development.





Science is at the forefront of developing machines and programs that **think intelligently**, in a similar way to humans.

What are your thoughts on the birth of **artificial intelligence**?



## Warm up discussion

What are some examples of artificial intelligence?

Do you have anything in your home you would label an **intelligent machine**?





## Vocabulary

**artificial  
intelligence**

**robotics**

**scepticism**

**perceive**

**enrich**

**cognitive  
function**

**speculate**

**natural  
intelligence**

**patronise**



**dominate**



## Sentences



Jill had a great deal of **scepticism** about the research results.

I **speculate** that independent AI could exist by 2060.



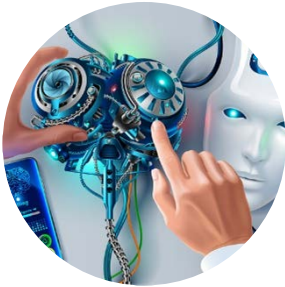
A very wealthy investor has decided to **patronise** the project.

Do you think **artificial intelligence** will be beneficial to society?





## Sentences



There is a lot of talk about **robotics** making many workers irrelevant.

John could **perceive** a change in the mood as he entered the room.



The subject displays a high level of **cognitive function**.

There are fears AI could **dominate** humankind.





## Artificial intelligence

- Mention **artificial intelligence** and many people bring to mind intelligent robots with **human traits**.
- In reality, **AI** takes many forms from search engines to smart cars to autonomous drones.
- Much of the AI that exists today is programmed to perform a **narrow task**, and is used day to day by most people.

### Examples of AI functioning today

- Voice recognition assistants
- Smart cars
- Targeted advertisements
- Media recommendation services
- Smart home devices





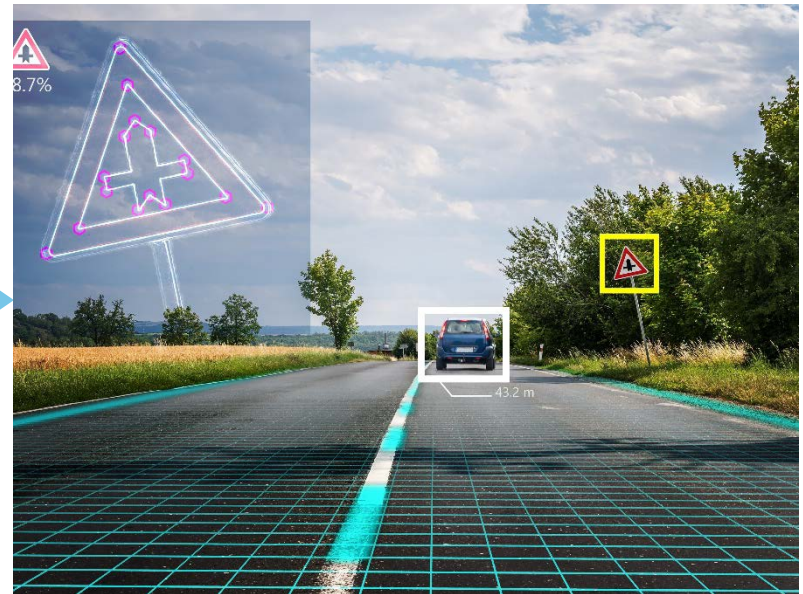
# Machine learning

- **Machine intelligence** is a different concept to **natural intelligence**.
- The **human brain learns by recognising patterns** – **machines** can only **recognise rules and data** with which they have been programmed.
- Machines learn through a process of **memorisation** and **computation**.

## Machine learning

Machines can learn by using complex mathematical structures which are built on huge amounts of data.

Using this data network, machines can recognise errors or mistakes from statistics and correct their behaviour, improving their performance constantly. **Machine learning is what enables AI.**





## Future projections

- AI has been developing at an incredible pace in recent years.
- Opinion among the public, experts and researchers is split – many believe that a self-aware, self-learning machine would grow immensely powerful, becoming beyond the control of its human creators.

### Potential threats of AI

- Danger to privacy: AI that can recognise speech and language could be able to read and identify information sent via e-mail, text or telephone calls.
- Danger to safety: Self-aware AI may decide that human existence is not in its best interest.
- Threat to the labour market: Many express concern that AI will replace workers in certain industries.





## Your opinion

**What is your opinion of machines with a greater independence?  
Talk to your teacher, and justify your response.**





## Active listening

**Discuss what you have learned about the following topics with the teacher.**

forms of AI

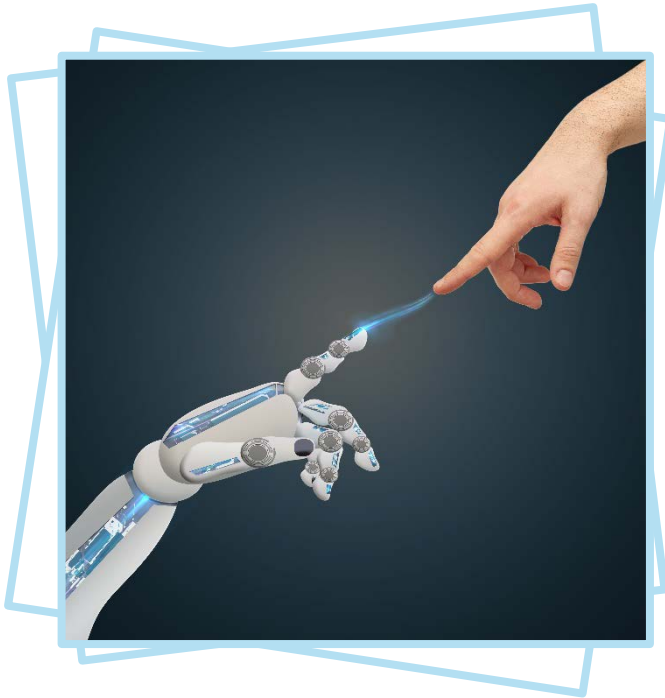
the future of AI

machine learning

potential threats  
of AI



## Humans and machines



Can a machine think and behave like humans do?

What are some human characteristics which might be difficult to program into a machine?



## The future of machine development

- The goal of many AI developers in the long term is to create a **full AI** – a machine with the capability of performing any intellectual task a human could.
- This kind of AI is still the domain of **science fiction**. This type of AI would be able to **outperform** humans at nearly any task.

### AI safety

Many researchers involved in the field believe that AI requires close attention to have a **beneficial** impact on society. The risk of negative **consequences** of a **superintelligent machine** or its ability to do something **devastating** beyond our control is real – research into AI safety helps researchers and developers better prepare for the **integration** of AI in the future.





## Opinions

- Many have **expressed concern** about the rise of intelligent machines.
- A **full AI** could potentially improve itself repeatedly and very quickly **surpass** the levels of human intelligence.
- Such a superintelligence could be able to **eradicate** many of our global issues. It is also possible that such an intelligence could have different goals than our own, leading to our **extinction**.

There is no way to **speculate** about the **consequences** of a full AI. There has never been anything of such advanced technology created, to which we can compare present technology.

Human beings dominate the planet because we are the smartest. If AI managed to replace our position would we still be in control?



labour market



This technology has the potential to dramatically affect the **labour market**.



## AI and society

- Several tasks **traditionally** performed by humans have already been **adopted by** AI, robots and algorithms. The **automation** of many jobs has a negative impact on wages and growth, leaving many workers unemployable and out of work.
- What happens to human **dignity** when we have been **replaced** by **functioning** intelligent machines that can complete our tasks with ease?

### Fields affected by AI

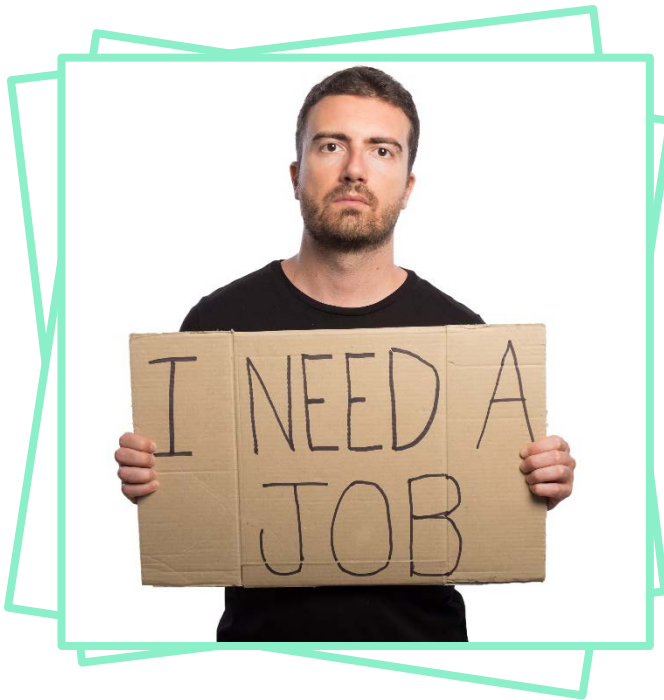
- Medicine
- Manufacturing
- Transport and logistics
- Customer service





## Explain to the teacher

**What impacts could self-learning machines have on certain industries?**





## Categorise

**Categorise future scenarios below based on your opinion of how likely or unlikely they are to occur.**

**Discuss with your teacher if you are unsure.**

AI destroys humanity

AI evolves into a superintelligence

humans become servants to machines

medical care becomes more efficient and leads to longer lifespans

society is completely revolutionised by the innovation of AI

teachers in schools become robots

nothing really changes

sharing your own vulnerabilities

the integration of AI into the labour market leaves many workers without a job

the invention of AI creates a paradise on Earth for humans

Likely

Uncertain either way

Unlikely

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## Talk about the impact of AI

**Talk about your opinion of the future of intelligent machines and how they will impact certain industries.**



education

military

logistics and  
transport

medicine



## Scepticism

- **Scepticism** is a significant doubt about the truth of something.
- We can politely express our **scepticism** about a topic by using words of contrast such as **but, yet** and **however**.

### Useful phrases

- I'm not sure I agree...
- I don't believe...
- It is an interesting idea, but...
- I have my doubts about...
- You make some good points, however...





## Neutrality

- If you have a **neutral feeling** about a topic you **don't feel strongly one way or the other**.
- Expressing **neutrality** is often about **expressing a lack of intensity**.

### Useful phrases

- I'm indifferent.
- It doesn't matter to me.
- On the one hand...
- Both points of view have merit.





## Enthusiating

- We can **enthuse** when we are **passionate about an idea**.

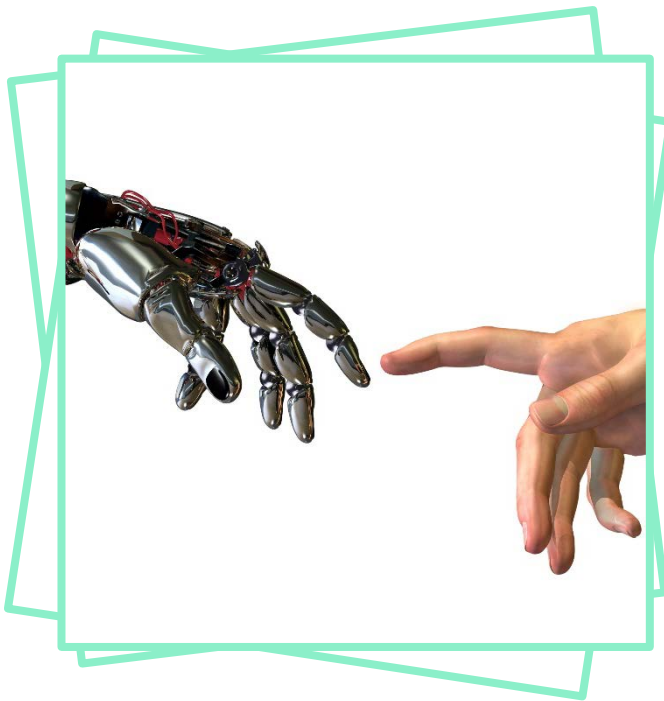


I completely agree!  
It is very likely that...  
I am absolutely certain that...



## Talk to the teacher

Speculate about the future of machine learning, using the images below as stimulus.





## Talk to the teacher

**Talk about your opinion of the future of machine development. Practise expressing scepticism, neutrality and enthusiasm in the following contexts.**



AI will bring benefits to humankind, and eradicate problems such as war and environmental issues.

The development of AI should be regulated and monitored carefully to ensure the negative consequences are kept in check.

AI has the potential to develop beyond our control, becoming more intelligent than any human and having the potential to destroy humankind.



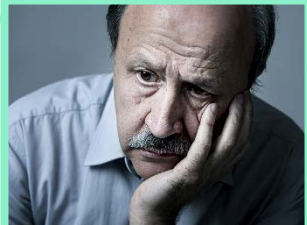
## Role play

It's time to practise giving your opinions  
Respond to each of the comments below.

Try to use the phrases from the lesson, as well as your knowledge of AI and machine learning to respond to the people in the conversation.

Try to express enthusiasm, neutrality or scepticism towards each point of view.

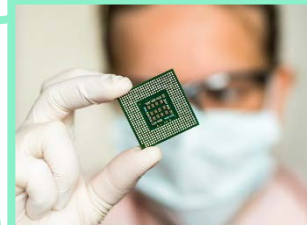
The rise of intelligent machines is inevitable – there is nothing to be done to stop it.



The potential of AI to solve all of the world's problems is enormous!



We should consider the development of AI to ensure it doesn't leave us poorer and disempowered.



AI is going to take over the world and destroy us all!





## Respond to the quote

**Respond to the quote below.  
What is your opinion?  
Be sure to express either enthusiasm, scepticism or neutrality.**

//

The automation of many jobs has a negative impact on wages and growth, leaving many workers unemployable and out of work. What happens to human dignity when we have been rendered obsolete by functioning intelligent machines that can complete our tasks with ease?

//



## Reflect on the goals

Go back to the second slide of the lesson and check if you have achieved all the goals of the lesson.

yes

no




## Reflect on this lesson

Think about everything you have seen in this lesson.  
What were the most difficult activities or words? The easiest?



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\_\_\_\_\_



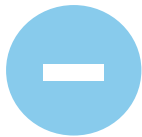
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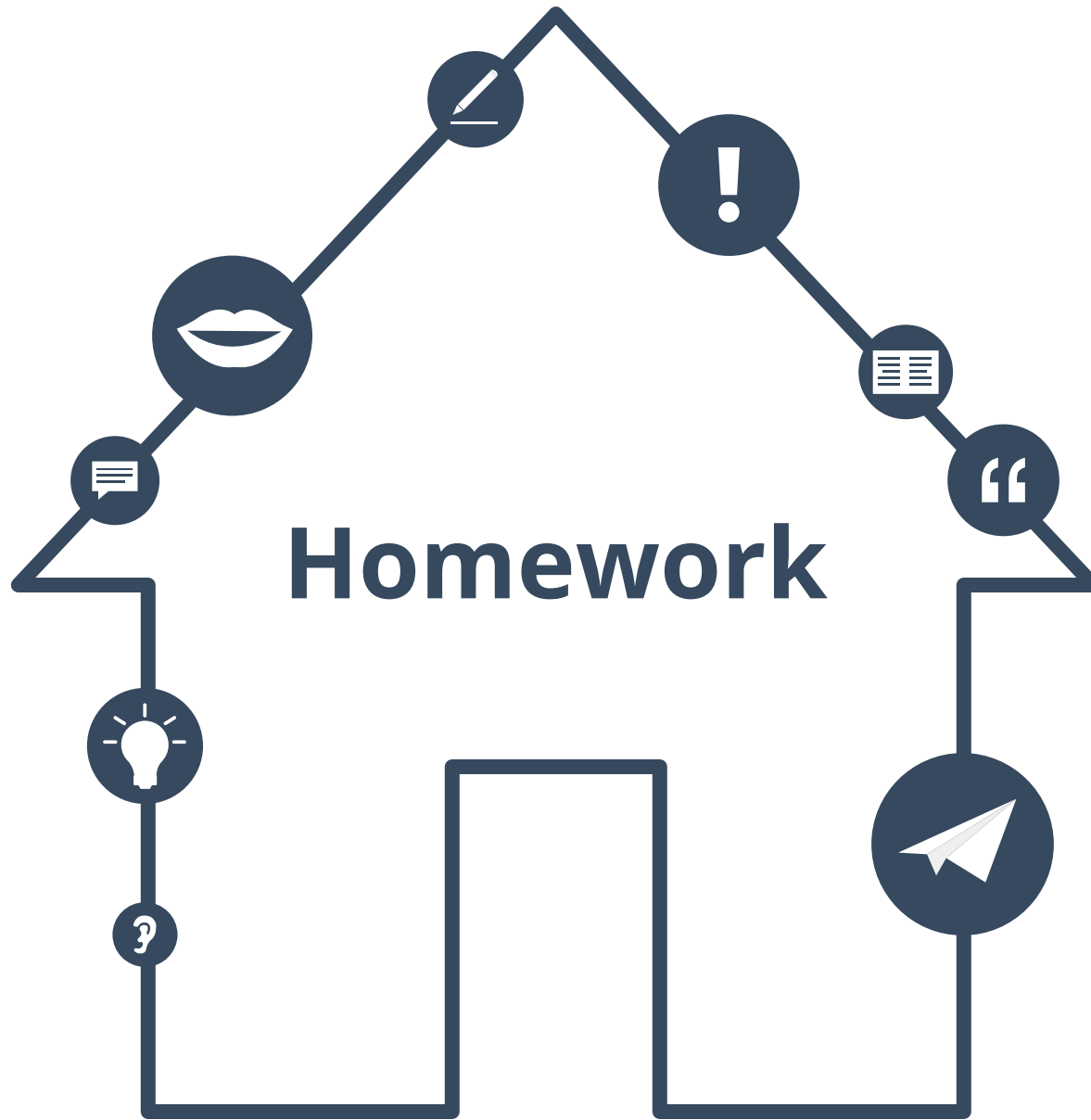


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If you have time, go over  
the most difficult slides again







## Write an email

**AI Corp is a new company planning to manufacture mass amounts of self-learning robots for the manufacturing industry. Write an email to the director expressing your concerns and skepticism about the production of mass amounts of intelligence machines.**

-	□	×
To: director@AICorp.com		
Subject: Issues with Artificial Intelligence		
Dear Sir,		



# Categorise the following opinions

- AI developers can be trusted to create safe AI
- the revolution in intelligent machines will create plenty of opportunities in the labour market
- AI will spread into the military, increasing the possibility of war
- humans will be able to keep AI development under control
- natural learning is superior to artificial intelligence
- humans will have more leisure time as robots take more human jobs
- artificial intelligence will overthrow humanity
- computers cannot replicate human cognition
- AI will end environmental degradation
- intelligent machines will put many out of work
- AI will create a new style of music, rendering human musicians obsolete
- machine learning is superior to natural learning

Enthusiasm

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Neutrality

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Skepticism

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