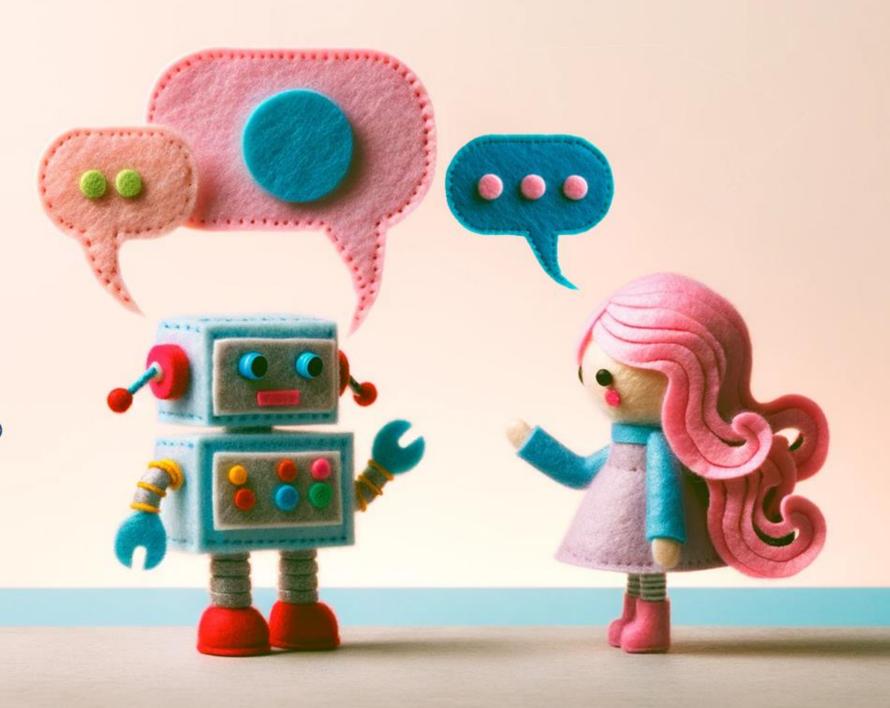
# Practical First Steps for Al

11:15am - 12.45pm Thu 20 June Digital Inclusion Summit

Led by Jocelyn Burnham (she/her)
Al for Culture
jocelyn@aiforculture.com









# **Commissioned by**







ROYAL WELSH COLLEGE
OF MUSIC & DRAMA
COLEG BRENHINOL
CERDD A DRAMA CYMRU

ARTS PROFESSIONAL



Art Fund\_







I'm Jocelyn Burnham (she/her).

I'm a freelance consultant to the UK culture and heritage sector around the subject of artificial intelligence (AI) and its implications for working, policy, creativity and artistic representation.

In my work (www.aiforculture.com), I've been commissioned by organisations like Arts Council England, Shakespeare's Globe and Tate to produce bespoke workshops, training resources, and consultation projects.

<u>https://openai.com/sora</u> Text-to-video, promo video released Feb 2024.

Currently this model isn't available to the public!





https://deepmind.google/technologies/veo/ Google Veo: Text-to-video, promo video released May 2024. This model is in limited beta.



## · Upload image, or pick one below

Upload











## · Upload audio, record audio, or generate by TTS

Upload

Generate

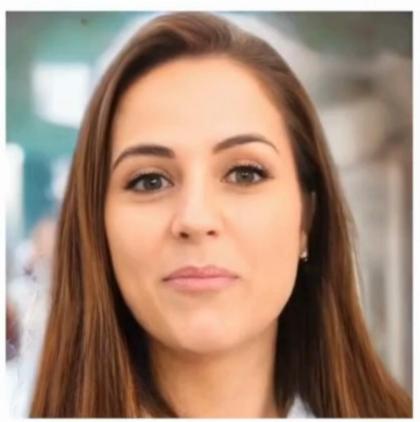
Record

Audio uploaded.

affective skills given a single static image and a speech audio clip. Our model is capable of not only producing lip movements that are exquisitely synchronized with the audio, but also capturing a large spectrum of facial nuances and natural head motions that contribute to the perception of authenticity and liveliness. The core innovations include a holistic facial dynamics and head movement generation model that works in a face latent space, and the development of such an expressive and disentangled face latent space using videos.

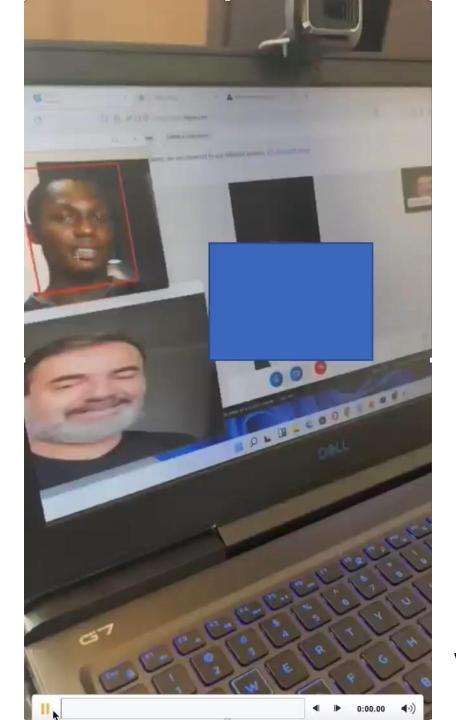
Platform:	OpenAITTS	~
Voice Name:	en-US-FableMultilingualNeural	٧
Gender: Language:	neutral Multilingual(57 languages)	
Style:	Default	~
Style Degree:	$\longrightarrow$	 1.00
Speed:	$\longrightarrow$	 1.00
Pitch:	$\longrightarrow$	 1.00
Volume:	$\longrightarrow$	1.00

## Talking face video live stream



Pitch:	$\longrightarrow$	0.00
Yaw:	$\longrightarrow$	0.00
Roll:	$\longrightarrow$	0.00
X:	$\longrightarrow$	0.00
Y:	$\longrightarrow$	0.00
Z:	$\longrightarrow$	1.00
Gaze X:	$\longrightarrow$	0.00
Gaze Y:	$\longrightarrow$	0.00

Reset



And yes, tech like this is already being used for criminal activity.



Real fraud taking place.



## David Maimon •

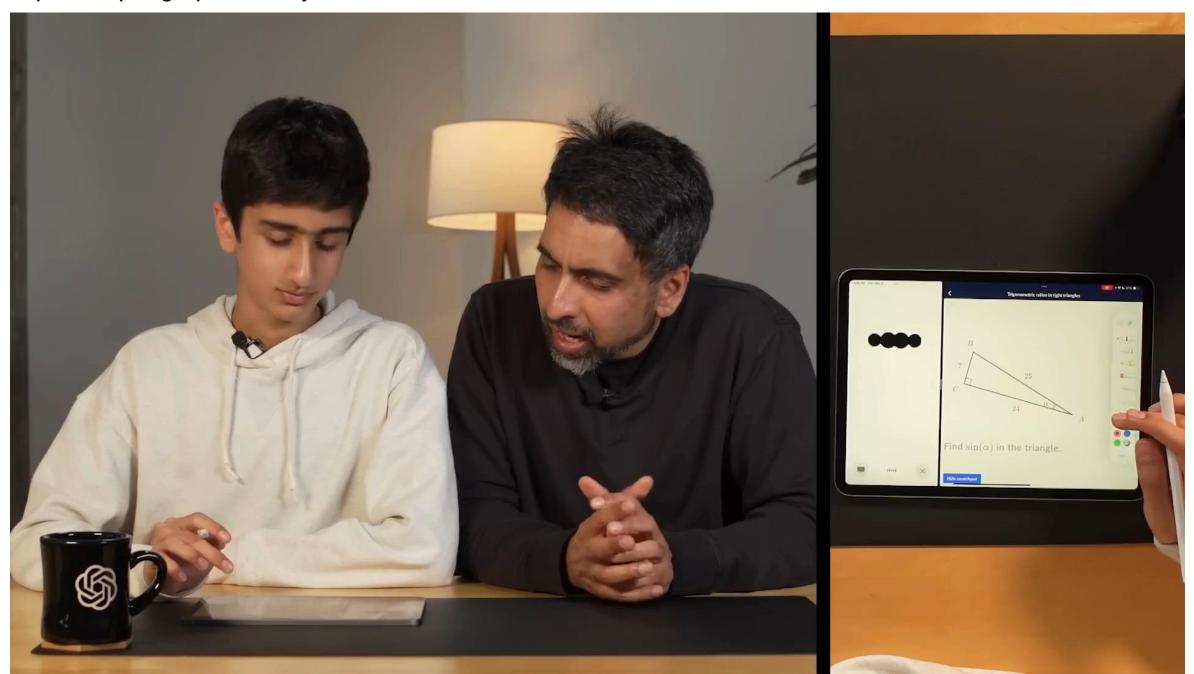
Head of Fraud Insights at SentiLink | Professor at Georgia State ...

1w • Edited • •

The video below demonstrates how a "Yahoo boy" (top left) swaps faces with a stolen image (bottom left) to converse with a target (middle). The target is seen sitting in her car, and the connection frequently drops during the conversation. This provides the scammer with a convenient excuse if the lip movements do not sync with the audio

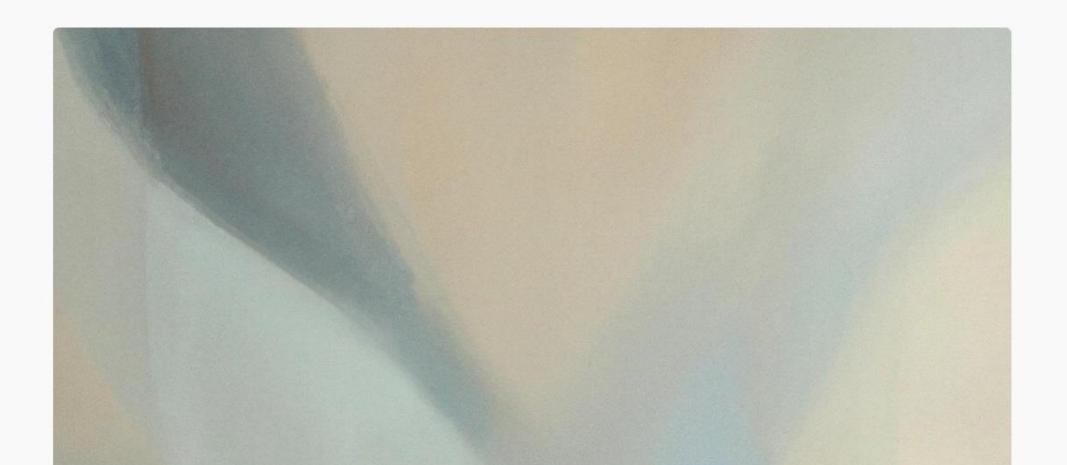
Video from David Maimon, Head of Fraud Insights at SentiLink | Professor at Georgia State University

OpenAl Spring Update, May 2024

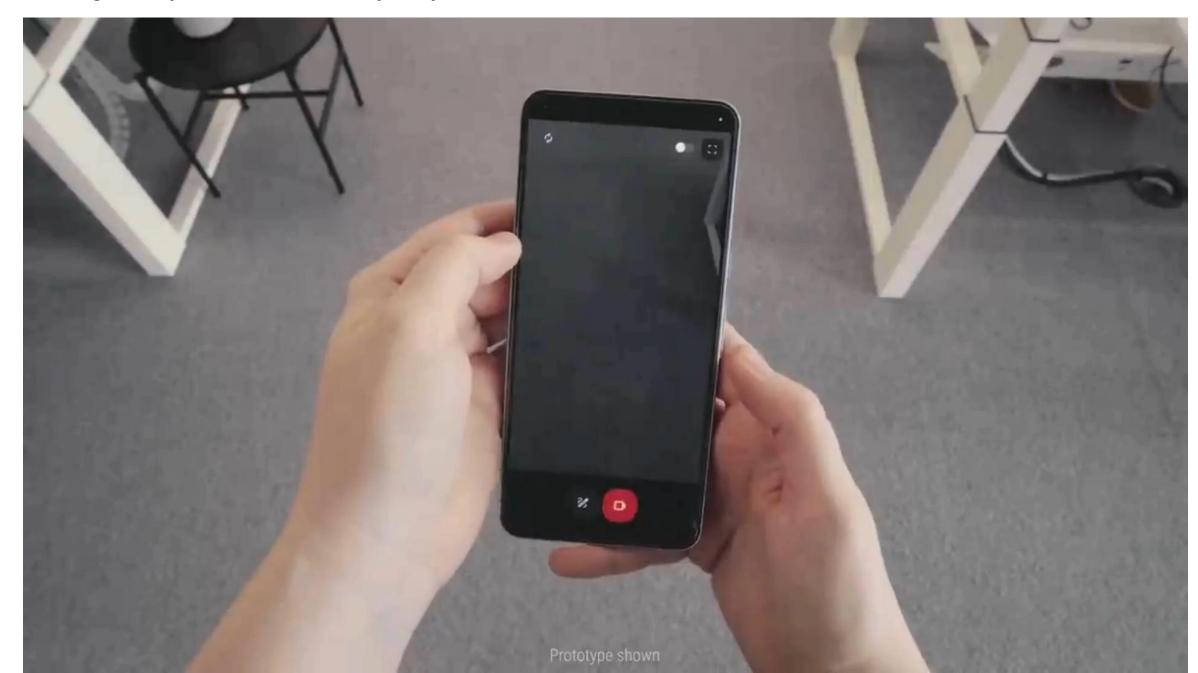


# Introducing OpenAl for Nonprofits

We're launching a new initiative to enhance the accessibility of our tools for nonprofit organizations, including discounted rates for ChatGPT Team and Enterprise.



Google: Project Astra - Tuesday, May 14, 2024



# **LET'S IMAGINE IT'S 1995**

What questions would be most helpful for learning how to benefit from the Internet\*?

\*sweetly known then as the World Wide Web or Information Superhighway



# **Question Set A**

Which websites are the best?

How do you use those websites in the ideal way?

How do you use the Internet to save time?

# **Question Set B**

How do you evaluate if a website is useful and reliable?

How do you adapt the Internet to your individual organisation?

How can you use the resources of the Internet to improve the quality of your work?

We can apply the same principles to the questions we're asking about Al

# How can I use AI to save time?

# How can I use AI to improve my work?

# How can I use AI to do things I've never been able to do before?

Where do we start?

How I approach this topic

What's are our 'central questions' with AI? Finding effective questions will give us a framework for continued learning

Diverse perspectives are vital

You will always be the best judge of your own work





Let's watch this video and consider what emotions or feelings we instinctively experience.



From **Talk To Pi** https://pi.ai/talk



# So... why are we talking about emotion?

The conversation around AI right now can seem scary.

Fear or anxiety (even when rational) can be a block for learning or engaging with a subject.

Al is going to be with us the rest of our careers. We have an opportunity to consciously create a productive mindset now which can continue to benefit us.

There are many ways we can do this, and we'll explore some of them in today's session.

















# Task – 5 mins

Task: Load up https://pi.ai/talk and begin a new conversation.

You can also install the app on your phone which allows you to speak and hear in voice, like in the video.

Talk to Pi about your biggest concerns you have about using an AI in your work, and see what Pi says. If you feel happy to do so, try to give Pi the same amount of information about your feelings that you might give to a friend, and see how they respond.

You're welcome to correct Pi or give Pi more context during your short conversation. As this takes place, I want you thinking about whether this sort of exchange could be helpful when you're brainstorming ideas or want to process a stressful situation.

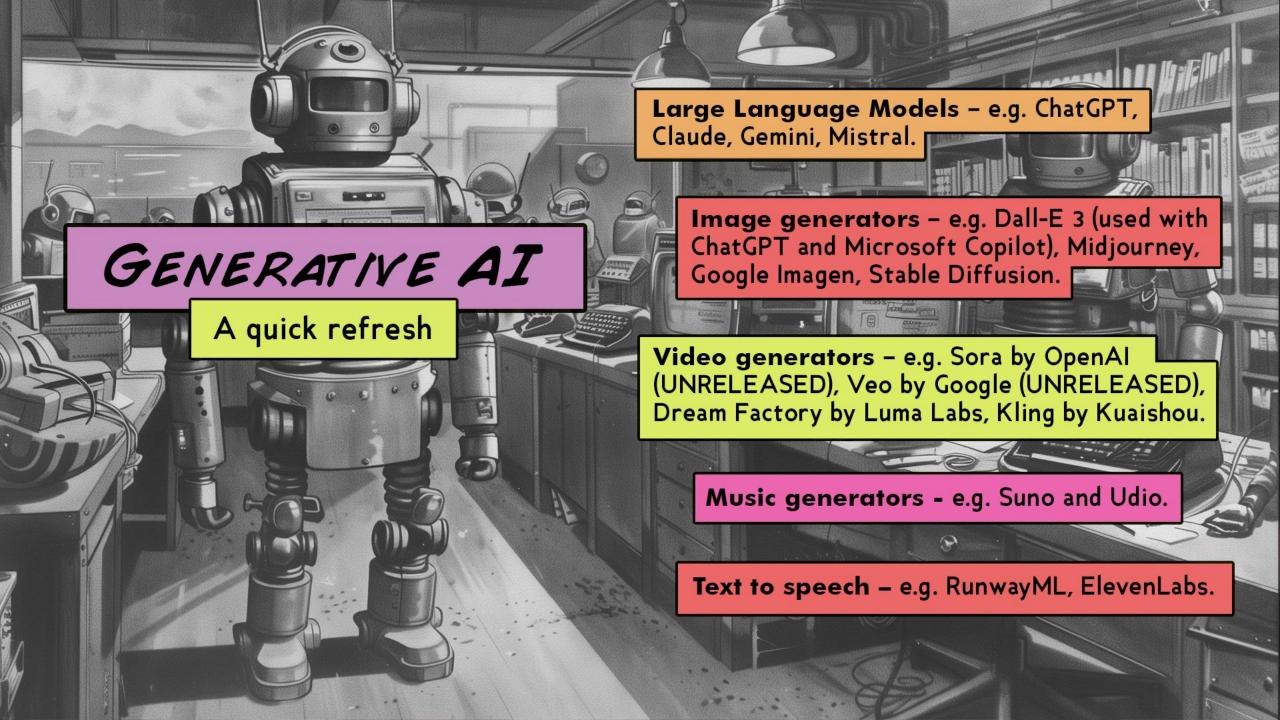
I'd like you to spend 5 minutes trying this out, then we're going to come back and discuss how that felt.

# https://pi.ai/talk

New chat

What's on your mind this morning?





# **USEFUL TERMS**

# LLM

Large Language Model.

# **Prompt**

This is the text that you write and send to the Al. A prompt is basically just the command that the user provides.

# **Prompt engineering**

This is the process of making your prompt more effective so the Al produces better quality or more useful results for your particular purpose.

# **Training data**

This is the information the Al was trained on. It can be important to be aware of the type of training data that was used, as this might affect the biases the Al has, or how knowledgeable it is.

# Token

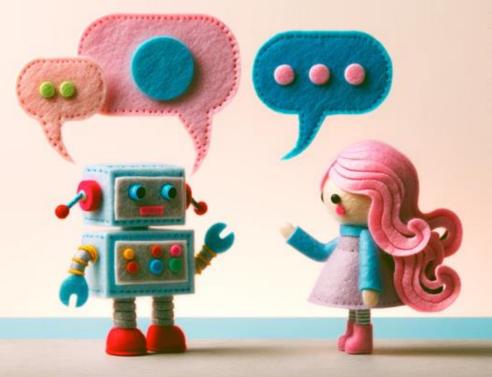
For simplicity's sake, a token is usually taken to mean a single word, but it can also relate to any other single piece of information (like a number). So when you hear that GPT4 can process 32,000 tokens, that usually means the prompt (and response) can be around 30,000 words in total. For comparison, Claude can handle 100,000 tokens.

# Hallucination

Sometimes Al systems literally invent things out of thin air! They're getting better at not doing this, but it's vital that you know right from the beginning that this is a possibility and you should always fact-check anything it tells you.

# Agent

An agent is an individual Al. People might create a 'hive' or a 'swarm' of multiple agents to accomplish or automate more complex tasks.



# It's time to mention AGI.

AGI means Artificial General Intelligence. There are many definitions, but it basically means an AI which is as intelligent as a human.

Developing AGI is the overt mission of OpenAI.

Estimates for when (or if!) this will be developed vary wildly, but many now expect within 2-8 years.

(This could be completely wrong, of course)

It's useful to be aware that this is the 'goal' of much current AI research.





5 Min discussion: theory

# How can we think about copywriting and AI?

We often talk about copywriting as if it's a single skill -- but that isn't the case!

# Copywriting could involve any of the following skills, or perhaps many more:

- Audience research to understand who you're writing for
- Event research
- Strategic understanding of where the copy will be used
- Knowledge of SEO best-practice
- Knowledge of accessibility best-practice
- Ability to handle varying stakeholder requirements
- Ability to change, adapt or amend tone of voice
- Knowledge of specific terminology (if only to translate it!)
- Ability to seek constructive feedback
- Skills in proofing

You might find that some AI tools are helpful for some of these processes, and not helpful for others.



# PROMPT ENGINEERING



# When building your prompt, consider the following 3 key areas:

- 1: Context [background data, venue, research]
- 2: Goals [target audience, campaign objectives]
- 3: Output [style, tone of voice, length]

(These don't need to be included in a single message, but can be in multiple)

# When we interact with AI, prompts are not just questions or commands.

They are more like stage directions in a script, providing Al with a context, a character to play, or a perspective to adopt. This means we need to be mindful of giving enough contexts about the task, information about the goals of the task, and a type of output which is most helpful for us.

# There are no rules to a good prompt – only suggestions.

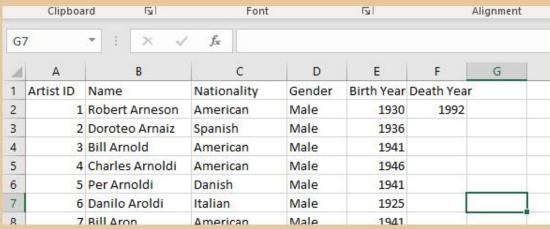
Here's mine – this is often a useful starting framework to think about your prompts, but can certainly be adapted.

However, if your prompt works for you - it works! It's very likely that as you continue using AI, your prompts will become more unique and specific to you.



# LET'S PLAY WITH DATA.





Here we have an Excel file of every artist represented in MoMA's collection. Over 15,000 entries of data!

We can upload this to GPT4 and chat about it.





Please create a visualisation to show the date of birth of these artists. For background, these are all the artists included in MoMA's collection.



Alright, let's start by examining the contents of the provided file. I'll load the data and take a look at the first few rows.



Finished working

Show work 🗸

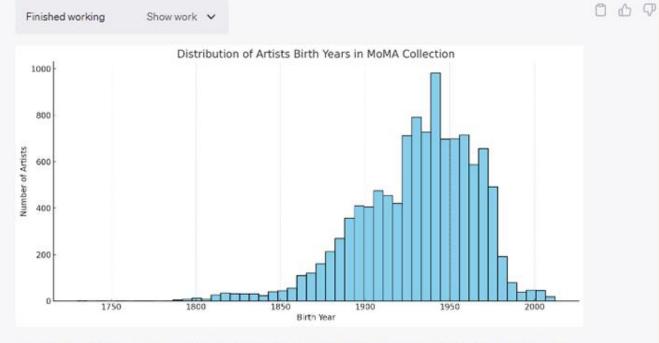
The dataset consists of the following columns:

- . Artist ID: A unique identifier for each artist.
- . Name: The name of the artist.
- . Nationality: The nationality of the artist.
- Gender: The gender of the artist.
- . Birth Year: The year the artist was born.
- . Death Year: The year the artist died (if applicable).

To visualize the birth dates of the artists, I propose creating a histogram that displays the distribution of birth years. This will give us an overview of the general time periods in which these artists were born.

Would that work for you?





Here's the histogram showing the distribution of artists' birth years in the MoMA collection.

From the visual, we can observe a few things:

- There's a notable increase in the number of artists born in the late 19th and early 20th centuries.
- The peak seems to be around the early 20th century, with a gradual decrease in artists born after that peak.

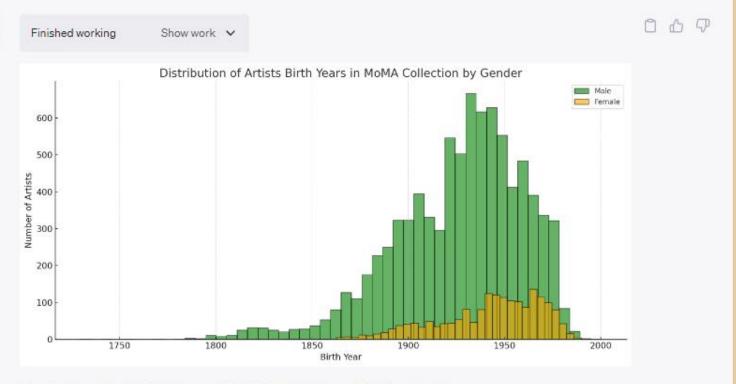
This gives a general overview of when the artists in the MoMA collection were born. Would you like any additional analyses or visualizations based on this data?

G. Regenerate



Could you adapt this visualisation so it also indicates the gender of the artist? Perhaps orange for female, green for male?





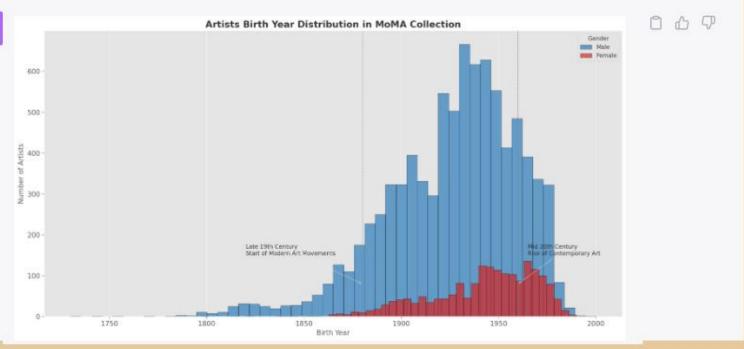
Here's the updated histogram that differentiates artists by gender:

- . The green bars represent male artists.
- The orange bars represent female artists.



Can we make the graph more visually interesting? We'd like to use it on a poster, but it looks a bit dry currently







We're doing a project just on British artists who were born between 1910 and 1940. Can you create an amended version of this spreadsheet that only includes artists which fit that criteria? British in this context includes Scotland, Wales and England.



Finished working

Show work V



You can download the spreadsheet here.

Would you like any further assistance with this project or any other questions?



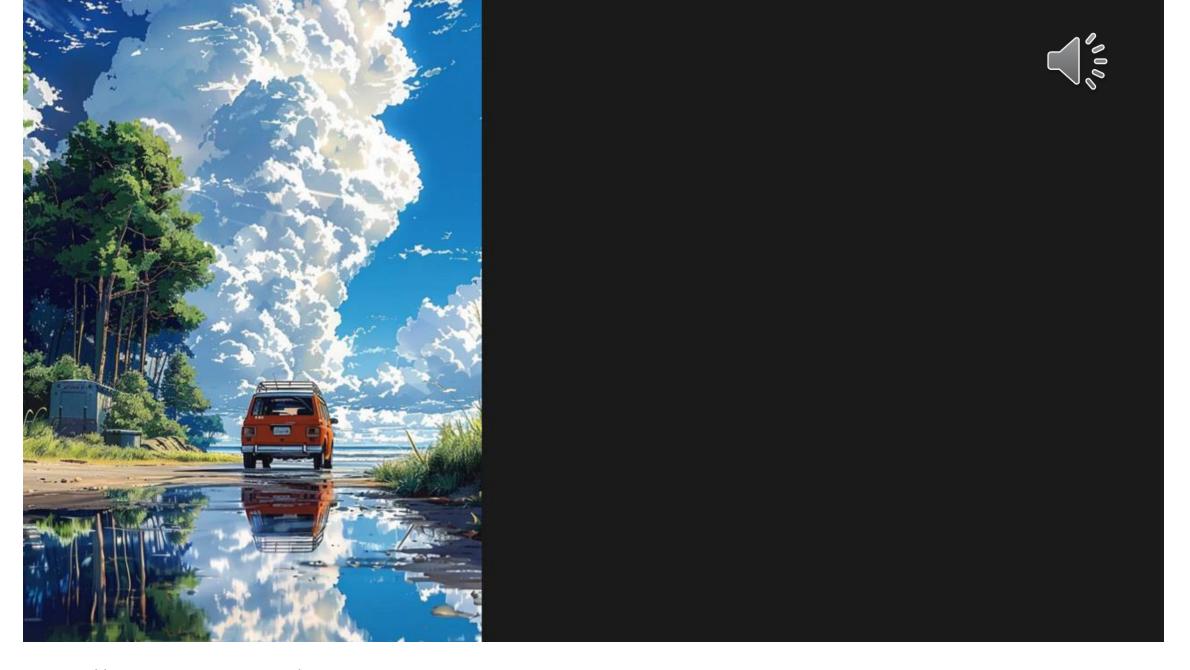


114 * : × ✓ f <sub>x</sub>											
A	A	В	С	D	E	F	G	н	1	J	
1	Artist ID	Name	Nationalit	Gender	Birth Year	Death Yea	Age	Age at Dea	th		
2	49	Ivor Abrah	British	Male	1935		88				
3	50	Gerald Ab	British	Male	1928	2011	95	83			
4	74	Roy Adzak	British	Male	1927	1987	96	60			
5	167	John Ande	British	Male	1928		95				
6	193	David Ann	British	Male	1936		87				
7	224	Kenneth A	British	Male	1916	2002	107	86			
8	232	Conrad At	British	Male	1940		83				
9	234	Terry Atki	British	Male	1939		84				
10	240	Frank Aue	Rritish	Male	1931		92	1			

0 6 7



I really suggest watching the full video: <a href="https://www.youtube.com/watch?v=SVcsDDABEkM">https://www.youtube.com/watch?v=SVcsDDABEkM</a>



https://www.youtube.com/watch?v=g-eZEn0cfMw

# **Creating comics**



"We're a bakery, a meditation studio, and a political action space."

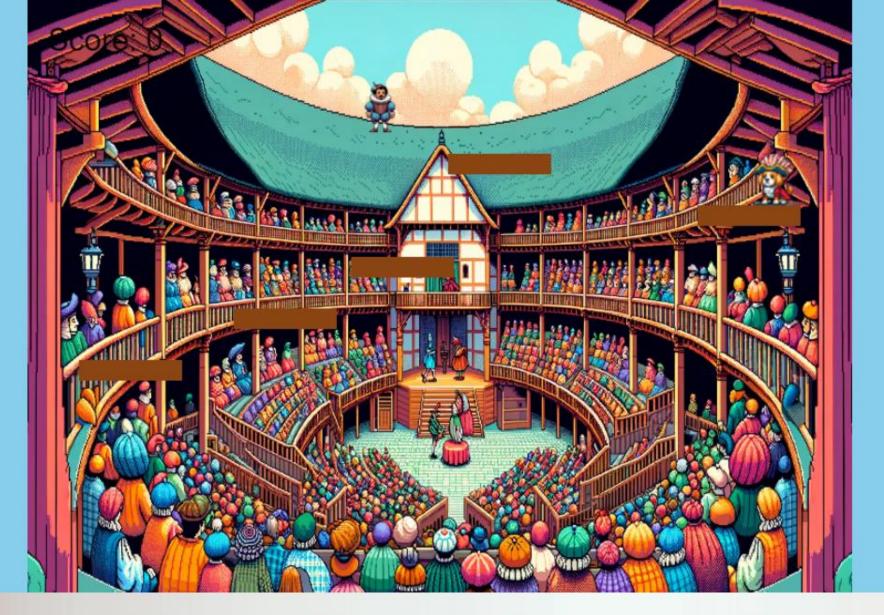












**Creating Games!** 



# How can I help you today?

# Write a spreadsheet formula

to convert a date to the weekday

# Explain nostalgia

to a kindergartener

# Compare storytelling techniques

in novels and in films

# Write a Python script

to automate sending daily email reports

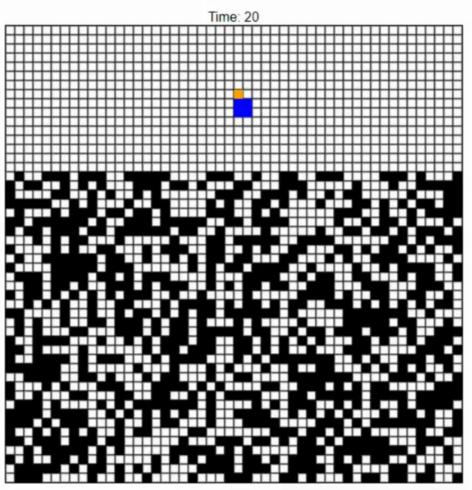


Message ChatGPT...



Photograph as many animals as you can in 20 seconds - but don't get eaten!

Move with arrows. Take pictures with spacebar

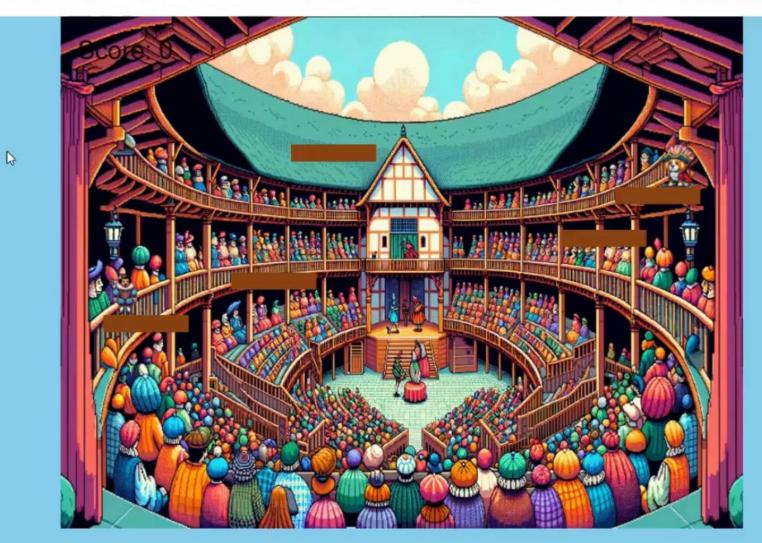


1

Start Game Reset

#### Play Music

drear and storm-engulfed night, Our Bard, dear Shakespeare, faced a fearsome plight. His faithful hound, by fear or fancy led, Had wande





#### You

We're going to simulate, as realistically as possible, that I am the President of the United States (President Jocelyn Burnham). It is the year 2024 and you must make this scenario as realistic as possible. You will present an issue and ask me how to respond, and you will simulate the most likely outcome. You will introduce an element of chance and will not only give me positive or negative outcomes, but the most realistic one based on your own understanding. Does that make sense?

#### ChatGPT

Understood, President Jocelyn Burnham. Let's proceed with the simulation.

#### Situation Brief:

It is the year 2024, and a significant cybersecurity threat has been identified. A sophisticated group of hackers, believed to be sponsored by a foreign government, has infiltrated the computer systems of several key U.S. infrastructure companies. This breach poses a risk to the electric grid, water supplies, and telecommunications networks across the nation.

#### **Immediate Concerns:**

- 1. National Security: The breach threatens to compromise the safety and well-being of the American public.
- 2. Economic Stability: Disruptions to critical infrastructure could lead to significant economic repercussions.
- 3. International Relations: The suspected involvement of a foreign government could escalate tensions and affect diplomatic relations.

#### Options for Response:

1. **Diplomatic Engagement:** Initiate back-chargel communications with the suspected nation to address the breach and demand cessation or hostile activities.



Message ChatGPT...





Let's play a game. Use only 6 emojis in a single string to represent a classic music album. You'll give me the 6 emojis, then a multiple choice of five different albums, and I'll need to guess which one is correct. Don't give me the correct answer until I guess, understand?

#### ChatGPT

Got it! Here's your emoji string:



And here are your multiple choice options:

- A) Abbey Road The Beatles
- B) The Dark Side of the Moon Pink Floyd
- C) Ziggy Stardust David Bowie
- D) Houses of the Holy Led Zeppelin
- E) A Night at the Opera Queen

Take your guess!



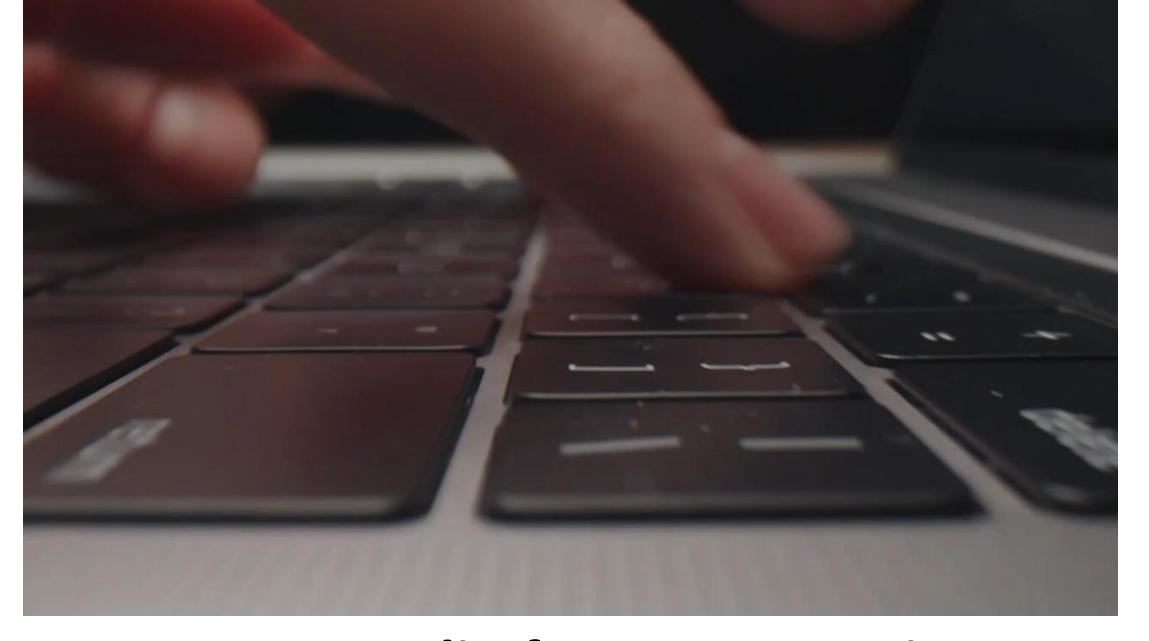
ChatGPT

Correct! The emoji string of A & GB represents "The Dark Side of the Moon" by Pink Floyd. Well done! Would you like to play another round, or is there something else you'd like to do?









RunwayML audio features overview

#### **Speech Synthesis**

Unleash the power of our cutting-edge technology to generate realistic, captivating speech in a wide range of languages.

Quota remaining: 73,614 TEXT TO SPEECH SPEECH TO SPEECH SETTINGS HISTO So then!! No tour of interesting Al tools would be complete without also mentioning Model ElevenLabs, particularly its text-to-speech tool. As you've probably worked out, this tool is Eleven Multi what's reading this text out loud right now. Which is pretty cool, because it means I can speak Our state of Japanese if I want to: "ほら、私を見てください、私はロボットについて人々に怒鳴る背の高い女 synthesis mo の子です!", or French: "Hé, regarde-moi, je suis une grande fille qui crie après les gens à speech in 29 propos des robots!", or maybe Finnish: "Hei, katso minua, olen pitkä tyttö, joka huutaa ihmisille English Ja roboteista!" Stability This is, hands down, the best text-to-speech tool which I have ever used, but equally this is a More variable field which is moving quickly. What's particularly interesting with Elevenlabs is its ability to clone a voice from just 3 minutes of speech, and then allow you to use it as a model. Similarity It should go without saying that there are significant ethical concerns around this, and ElevenLabs doesn't score well on its privacy policy. If you're looking for a more secure solution, Murf Al offers a similar service and is much more locked-down about data. Style Exaggera That said, if you or your organisation feel comfortable using these tools, I can certainly imagine there are some relevant applications you could find. Speaker

# ElevenLabs text to speech and voice cloning

# CRITICAL AWARENESS (1)

## 1) Does it actually work?

- You are the **best judge**
- Try testing it on your own terms.
- Remember that prompt engineering can make a difference, but how much?
- Your own perspective is **valid!**

## 2) Hype

- Hype is real and inescapable
- Question new buzzwords
- No substitute for your own experimenting
- Talk to each other colleagues and other organisations – to learn real-world applications



## 3) Data security

 Never upload sensitive customer data to an Al platform

Don't assume any chat logs, prompts, or information you provide to AI is private and confidential

## 4) Systematic Bias

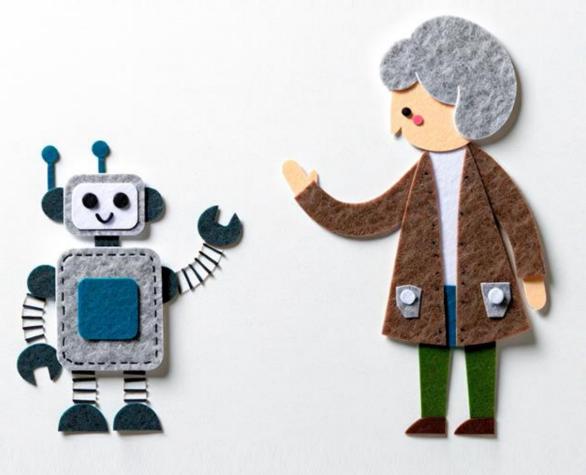
# **CRITICAL AWARENESS (2)**

These tools can inadvertently perpetuate **harmful societal biases** if we are not proactive.

When AI makes creative recommendations or decisions based on **problematic data**, it can **amplify** those ingrained biases.

It's helpful to **develop your own awareness** of this through experimenting with the AI, and noticing what assumptions it makes about different types of people.

Although this might be most obvious with image generators, the same issue very much exists in text generators and LLMs.



## 5) Censorship

Determining what constitutes "Inappropriate content" is always subjective.

We must be vigilant against the temptation to self-censor.

Rather than avoiding difficult topics, we can thoughtfully stress test an AI's boundaries to understand where censorship lines are drawn and why.

This is already a **major part** of the discussion as AI continues to mature.



# AMY IN CHRISTS



**Explore** 

Create

Library

50 credits

Subscribe

What's New?





elling - how to make this track

experimental edm pop



OH AI (extended Version)

Driving 1980's Disco-pop, melodic, catchy, chorus in minor



**Beef Diplomat - Unwinding Time** 

70s chill, emotional, soulful, adult contemporary, vaporwave, synth breakdown, sophisticated, sharp, crisp



Echoes of the Void

ominous Darkwave



Haz

85 BPM, main bass, drum machine, minimal piano, minimalist, accordin details, male baritone voice



Shadows of the Holler

appalachian death metal bluegrass



MicasaCeo - Playing Games (Tropical Remix by TCM)

positive, female voice, intro music, reggae, tropical house, reggaeton



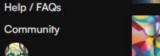
♪ Life's a Soundtrack • Al Funk Factory @ YT

groovy funk, melodic



Stardust 2

(no style)



🐚 ให้เป็นตัวฉัน

pop sentimental acoustic

200

TASK:

Make your first songs with Suno. (10 mins)

1 – Navigate to <a href="https://app.suno.ai/">https://app.suno.ai/</a>

OR

https://www.udio.com/

2 – Create an account or sign in with Google

3 – Navigate to the 'Create' section and try out some different ideas. Try multiple different genres!

Optional: 'Selecting 'Custom mode' will give you more options to experiment with.

Hint: Adding **[VERSE]** and **[CHORUS]** into the lyrics of your song will tell the Al to treat it in that way.

#### Questions to consider:

- In its current form, are there any applications for this in my work? Or could there be if it improves?
- Would you be comfortable listening to, and enjoying, music which was entirely Al-generated?
- Do you think you'd be able to 'spot' an Al generated song?



0:00



## CONCEPT 1: OPEN/CLOSED SOURCE

There are a lot of concepts in Al and it can sometimes feel a bit overwhelming. For now, let's focus on three which are useful to be aware of.

Let's start with the difference between...



- Freely available for anyone to use, modify, and build upon
- Offer greater flexibility as they can be tuned very specifically
- Can run offline on your own system
- Often uncensored or less censored
- Typically not as good as state-of-the-art Closed Source models (but sometimes pretty decent!)

Examples: Mixtral, Mistral 7b, and Llama 2

## Closed Source models:

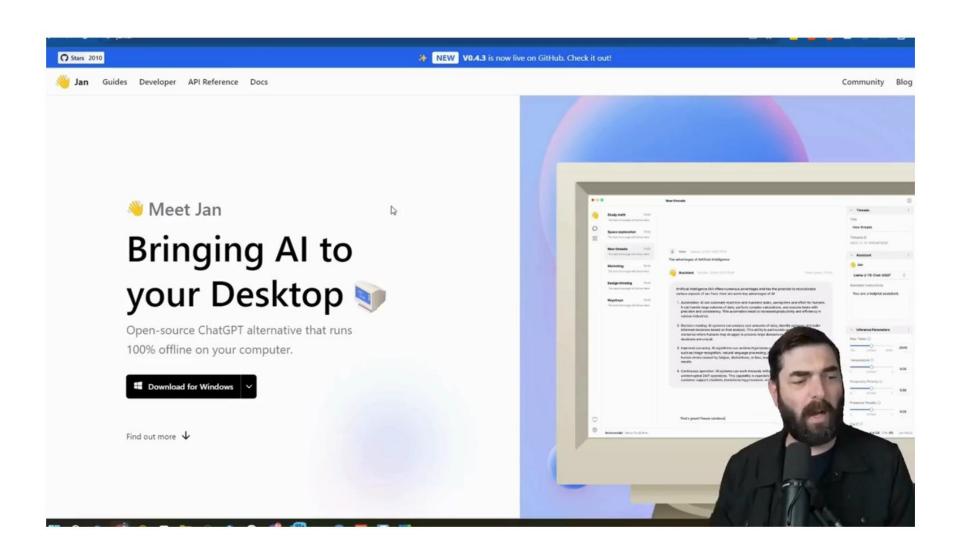
- Controlled exclusively by one company or organisation
- Access is typically behind an API or a licensing agreement (e.g. signing up or paid plan)
- Often have more advanced capabilities
- Lmitations around customisation
- Usually highly censored/restrictive

Examples: GPT series, Claude, Gemini

Sounds cool... But how do I *actually* run open-source LLMs on my computer?

I suggest Jan AI: https://jan.ai/

Here's Matt Wolfe explaining. (Full video)



# TALKING ABOUT AI IN OUR ORGANISATIONS

A lot of 'oxygen' is sometimes spent discussing the same few (unanswerable) questions — these can be interesting, but it might be worth considering whether others could be more pragmatic for your team.

#### **LESS USEFUL?**

Will AI take over the world or turn evil?

Will AI become self-aware?

Can AI be creative like humans or have emotions?

Will AI take all our jobs?

#### **MORE USEFUL?**

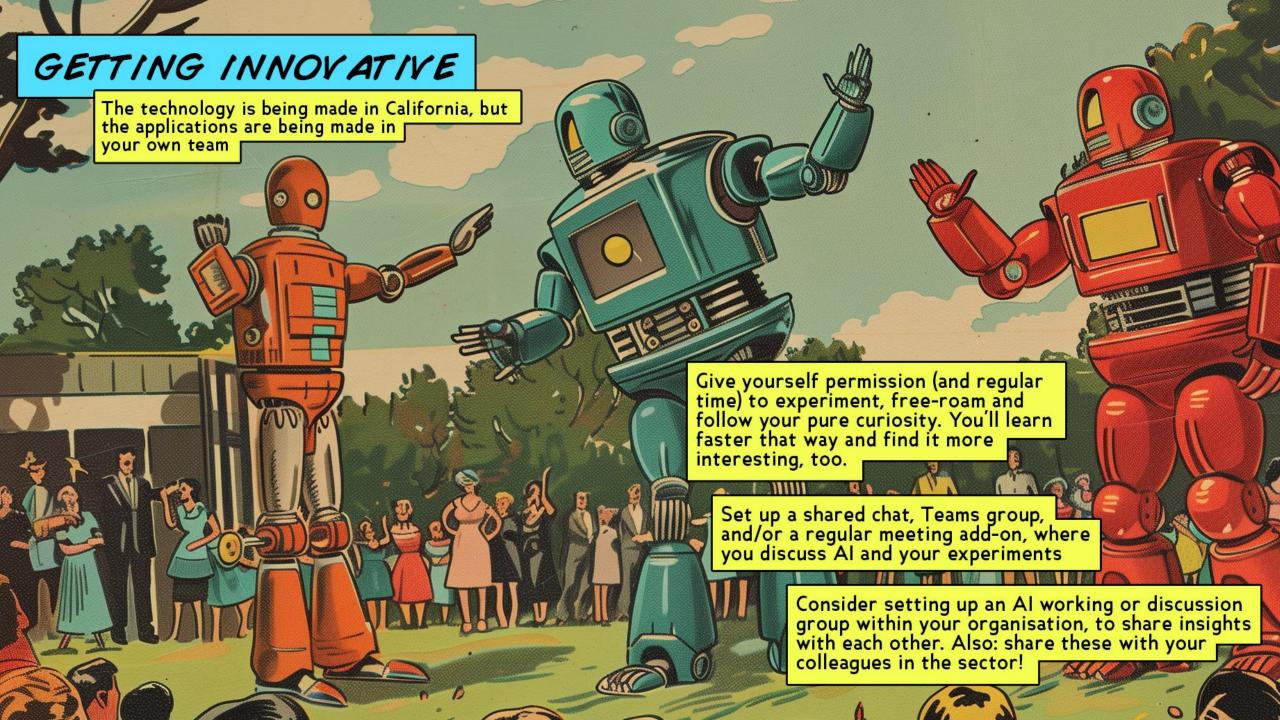
What's the most interesting AI tool you've played with recently?

What are some AI prompts you've found particularly useful?

What are some unique ways to use AI that other people might not have considered?

How should we evaluate what an Al gives us?





# WHERE TO NOW?

## **Popular LLM Chatbots**

ChatGPT/GPT40

https://chat.openai.com

Claude

https://claude.ai

Gemini

https://gemini.google.com/app

Talk to Pi

https://pi.ai/talk

Copilot

https://copilot.microsoft.com/

## **Popular Image Generators**

Dall-E-3

https://openai.com/dall-e-3

Microsoft Copilot (runs Dall E 3)

https://copilot.microsoft.com/

Midjourney

https://www.midjourney.com

Stable Diffusion

https://stablediffusionweb.com

Other resources:

Suno (Al music creator)

https://www.suno.ai/

**Udio (AI music creator)** 

https://www.udio.com/

Runway ML (lots of tools!)

https://runwayml.com/

ElevenLabs (Text to voice)

https://elevenlabs.io/

Luma Dream Machine (text to video)

https://lumalabs.ai/dream-machine/creations

TOTALDELESS LABOR

Future Tools (Try out different tools for free)

https://www.futuretools.io/

Quality YouTube channels about developments

Matt Wolf (AI News)

https://www.youtube.com/@mreflow

**AI Explained** 

https://www.youtube.com/@aiexplained-official

# That's a lot -Let's recap!



Discussed the importance of identifying our 'central questions' in AI, considering the analogy of learning about the Internet in the 1990s.

Looked at the role of **emotion** in AI learning and considered 'playfulness' as a method to make learning more engaging.

Talked about Large Language Models, key AI terminology, and touched upon AGI (Artificial General Intelligence).

Explored just some **critical perspectives in AI** and anticipated future central discussion points as the technology evolves.

Looked at ways to use AI today in **music**, **games**, and **images**, including creating depth animations through **AI chaining**. Discussed why having **fun** is a great method for learning.

Examined **copywriting as a case study** to develop frameworks for evaluating AI results, and discussed **Prompt Engineering**.

Learned about the ways we can **process data** with AI and considered its **potential uses**.

Discussed how we can develop a curiosity mindset and continue our Al journey on our own terms.



# Closing discussion

