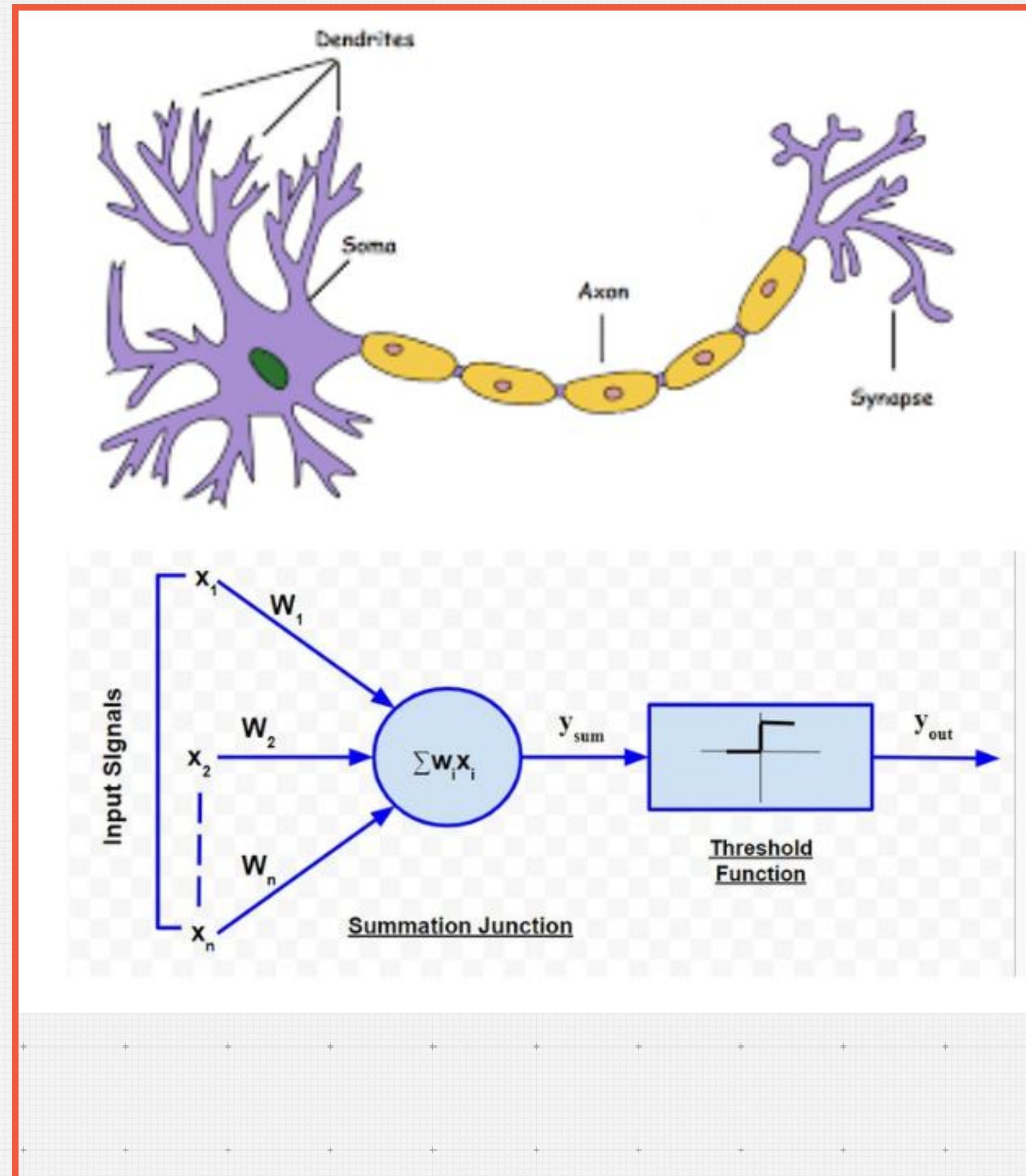


100xEngineers

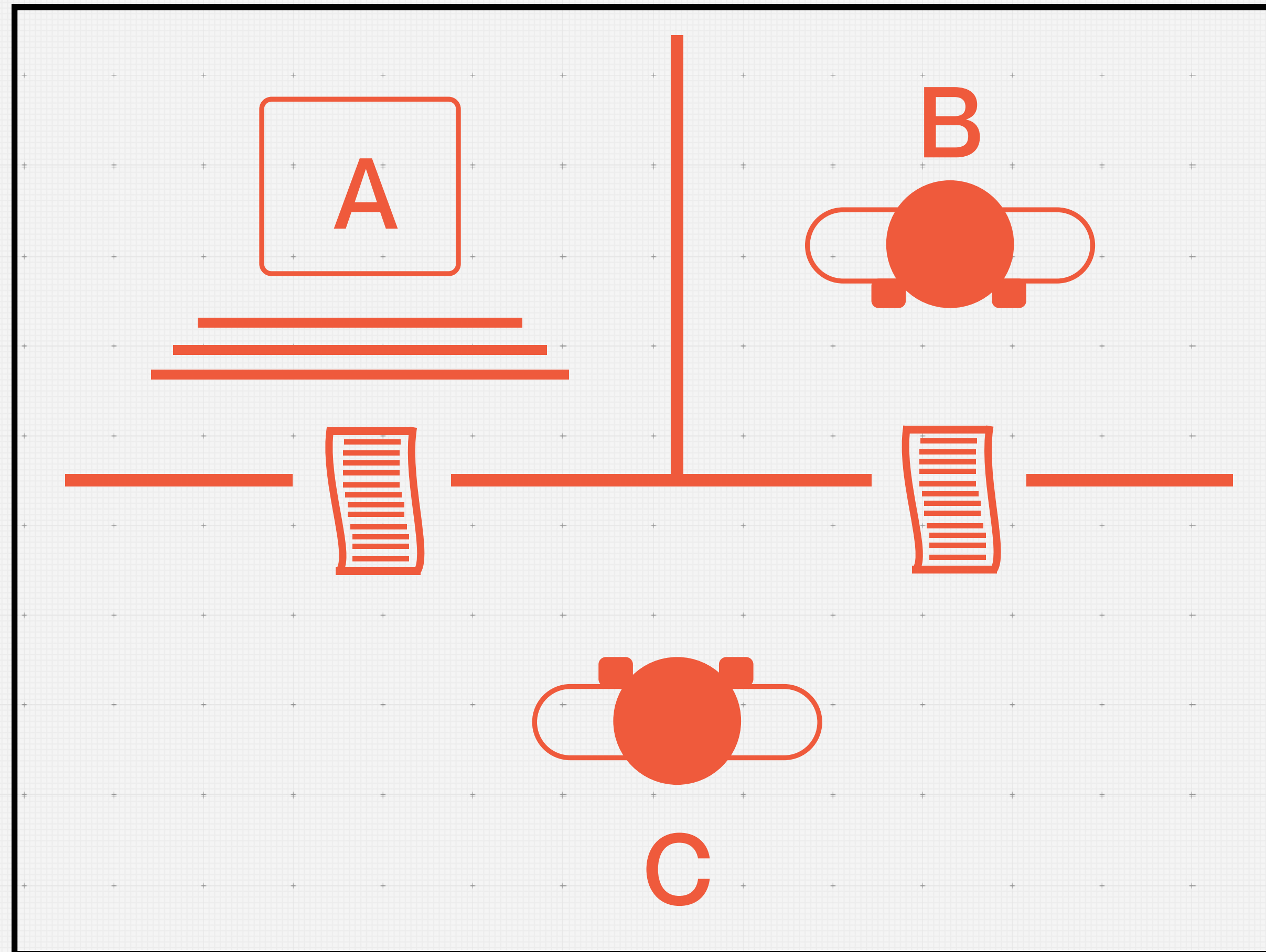
# Lecture 1

History, How to stay in the loop and Intro  
to Playground AI

# 1943 : McCulloch-Pitts Neuron Model

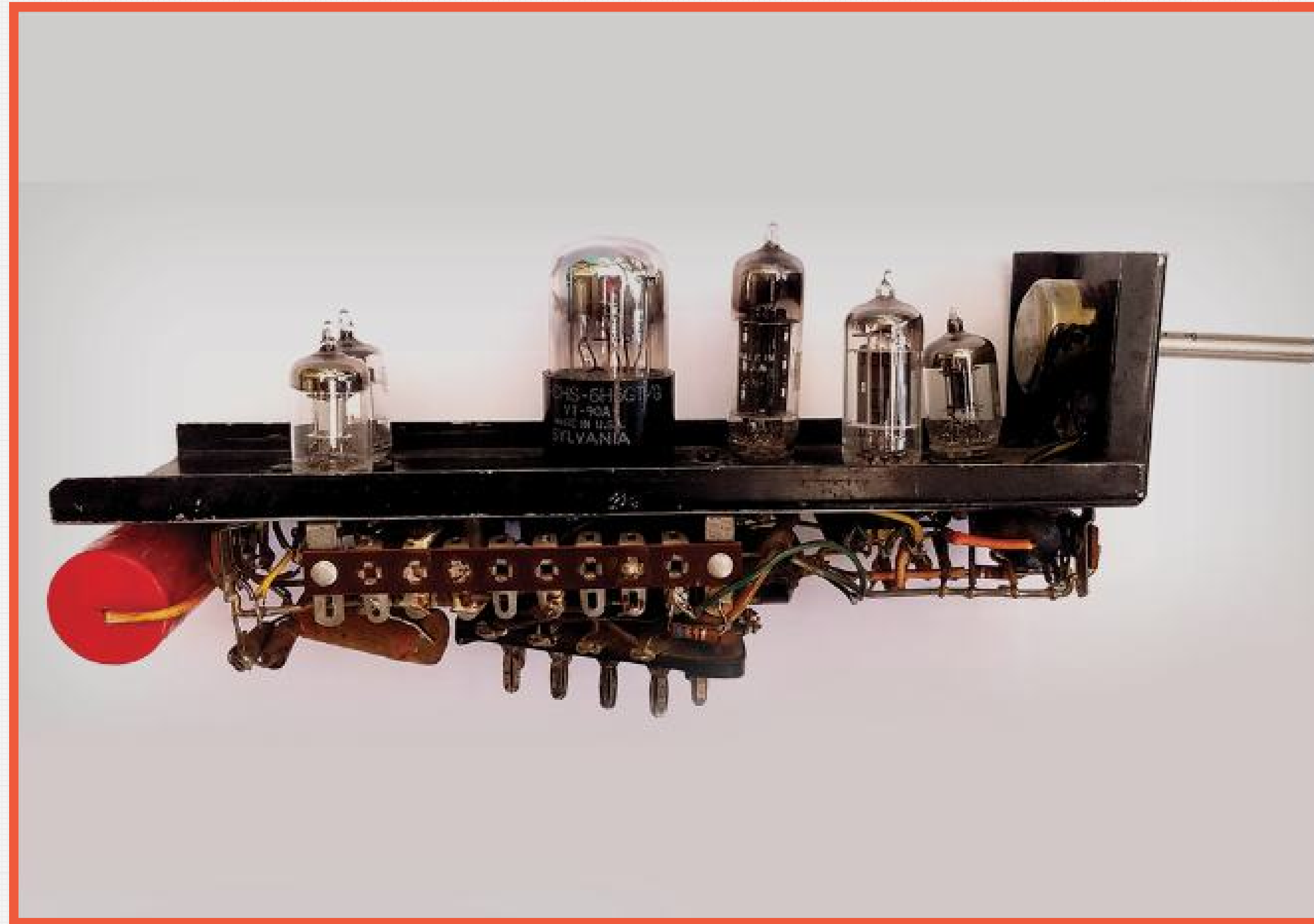


# 1950 : Turing Test





## 1951: SNARC by Marvin Minsky



# 1956 : Dartmouth Workshop

## 1956 Dartmouth Conference: The Founding Fathers of AI



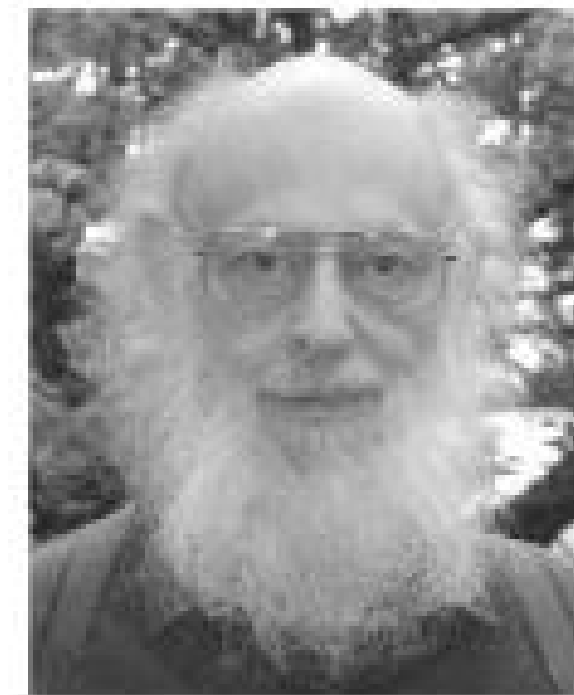
**John McCarthy**



**Marvin Minsky**



**Claude Shannon**



**Ray Solomonoff**



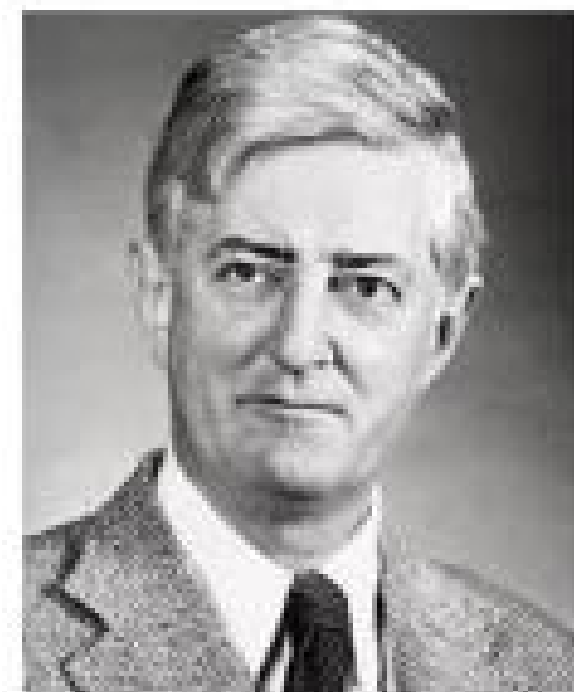
**Alan Newell**



**Herbert Simon**



**Arthur Samuel**



**Oliver Selfridge**



**Nathaniel Rochester**



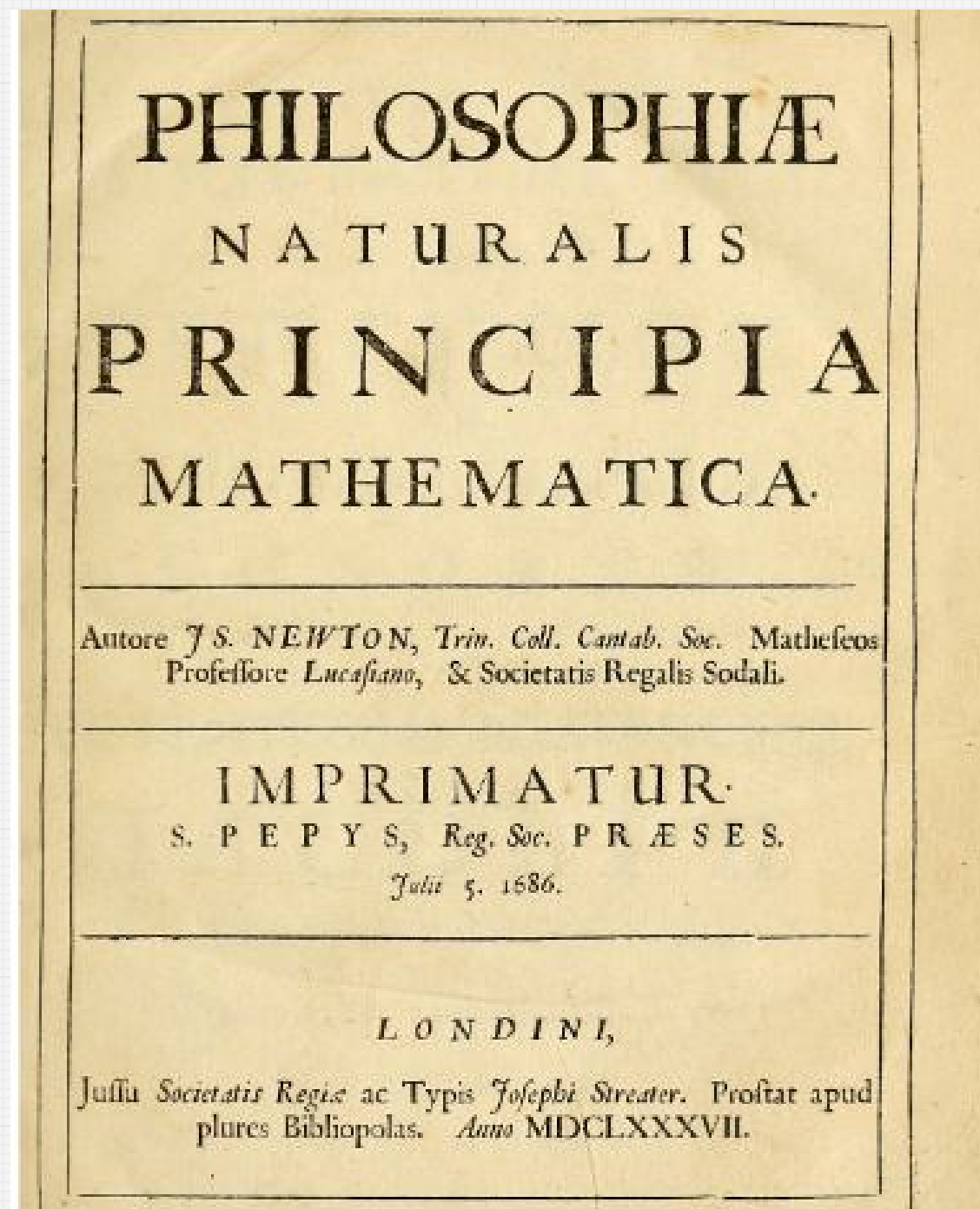
**Trenchard More**

# 1961: MIT AI Lab

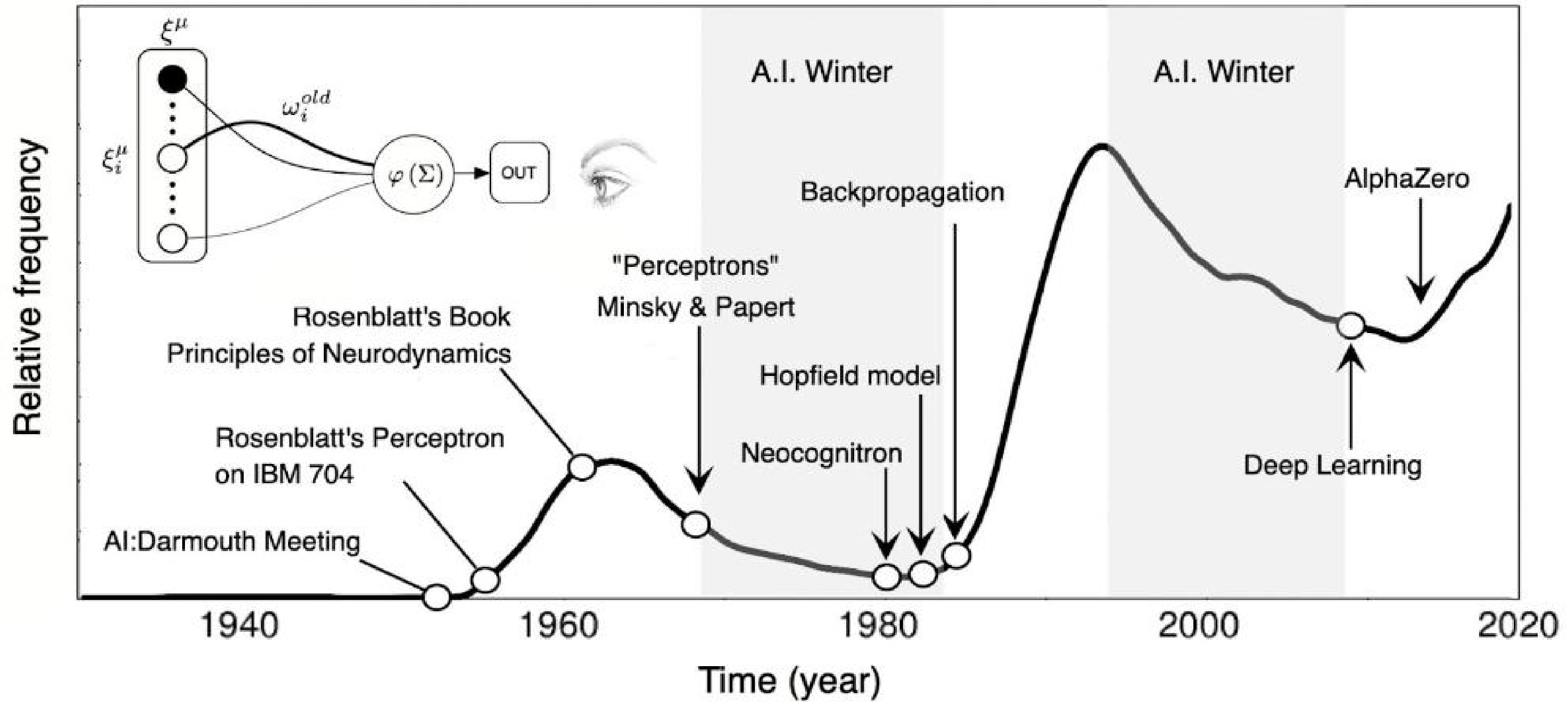




# 1961-74 : Math, Language, Chatbots & Robots



# The AI Winter





## 1997 : Deep Blue



## 2011: Watson wins Jeopardy!

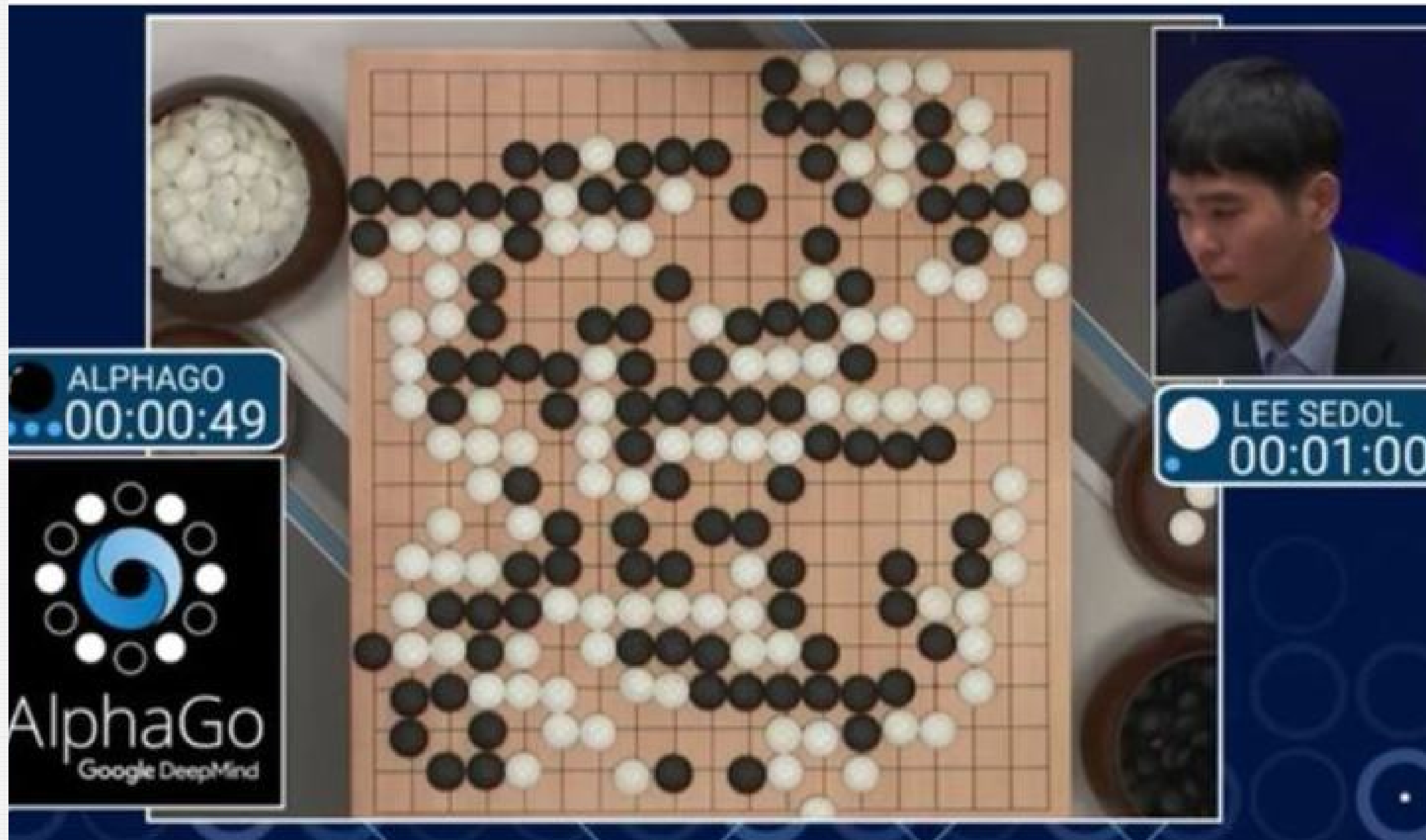


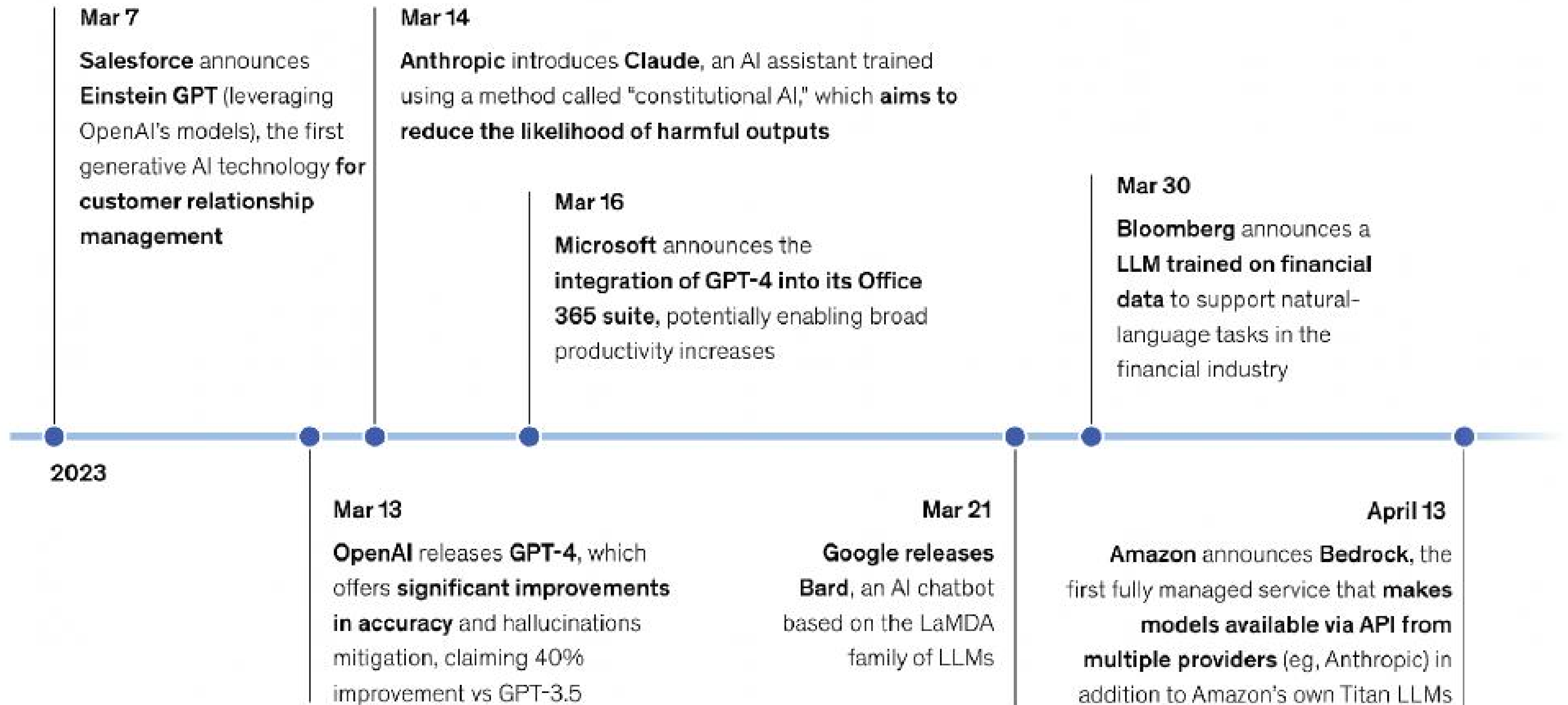
**2015** : OpenAI founded with \$1B funding





# 2016 : DeepMind's AlphaGo





Breakthroughs that once took years, now take days

# Why it's not **hype anymore?**

- Faster processing and compute
- Insane amounts of data for training
- Foundational models
- OpenSource ecosystem



## **3 Outcomes** of GenAI Wizardry

- How to stay updated
- How to finetune & build workflows
- How to productize

# Curriculum Breakdown

- Week 1**
  - History of GenAI, How to Research and Intro to Playground AI
  - How Diffusion Models work & Playground AI
- Week 2**
  - Prompt Engineering for various outputs
  - Intro to Stable Diffusion & Basic Parameters
- Week 3**
  - CivitAI, Checkpoints & SD Versions + txt2img, ControlNet & Scripts
  - img2img and Parameters + Extensions
- Week 4**
  - Intro to Finetuning with LoRAs using KohyaSS
  - LoRA Training
- Week 5**
  - Theory of finetuning & Data Prep
  - Dreambooth Training
- Week 6**
  - ComfyUI - The Basics
  - ComfyUI - Advanced Workflows
- Week 7**
  - ComfyUI Workflows + Fooocus
  - Voice Model Training



# Curriculum Breakdown

**Week 8** • PROJECT + CATCH-UP

**Week 9** • Intro to programming in Python  
• Python exercises

**Week 10** • Python for ML/AI  
• Gradio

**Week 11** • Streamlit  
• Building an API with flask server

**Week 12** • Intro to openAI APIs  
• Intro to Assistant APIs

**Week 13** • Project building feat. Agents  
• Intro to Hugging face: Models, Datasets, Spaces

**Week 14** • Inference APIs, Transformers lib  
• Project

**Week 15** • Project  
• Finetuning text-based model (Auto train)

**Week 16** • Llama factory  
• Intro to RAG

**Week 17** • Difference between RAG and Fine tuning  
• Intro to langchain

**Week 18** • building production ready RAG app  
• Intro to Vector DB and supabase

**Week 19** • Intro to replicate and deployment  
• Deploy custom model: Cog setup

**Week 20** • Pytorch  
• Connecting everything: Roadmap for where to go from here next

**Week 21** • CAPSTONE PROJECT



# Projects

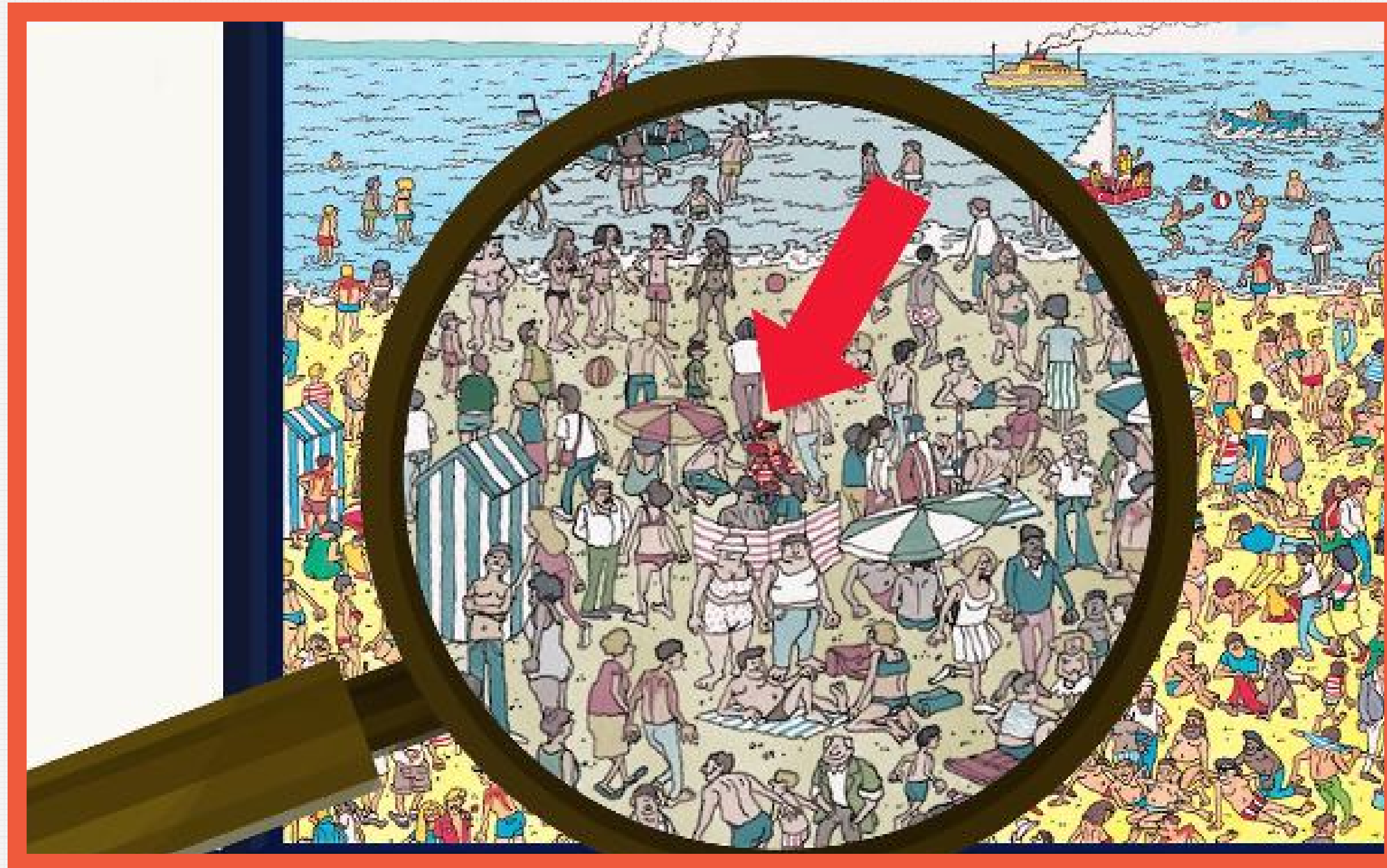
- Playground AI Practice Prompt
- Practice + SD Exercises
- FaceSwap Engine
- Illusion Diffusion
- Interior Design Engine
- Product Design Engine
- Finetune a LoRA
- Finetune on Dreambooth
- Custom COMfy Workflows
- Animate Diff AI Fashion Generator
- Make your own AI Influencer Avatar
- Build a chat UI with gradio/JS
- Build your own AI portfolio or landing page for your products

## Must-Do's

- Rituals for research
- Hands-on practice
- Projects and Capstone



# How to stay **updated**?





# How to do research on **AI Models**?

- GitHub trending (<https://github.com/trending>) to find an Interesting repo to play and tweak around with.
- Arxiv.org for new Papers or check old papers which is already
- Website to find websites built with AI models as Base - <https://theresanaiforthat.com/>

# Twitter folks to **follow**

- [https://twitter.com/heyBarsee\\_](https://twitter.com/heyBarsee_)
- [https://twitter.com/bilawalsidhu\\_](https://twitter.com/bilawalsidhu_)
- [https://twitter.com/\\_akhaliq](https://twitter.com/_akhaliq)
- <https://twitter.com/mreflow>
- <https://twitter.com/omarsar0>
- [https://twitter.com/seb\\_ruder](https://twitter.com/seb_ruder)
- [https://twitter.com/karpathy\\_](https://twitter.com/karpathy_)
- [//twitter.com/hardmaru\\_](https://twitter.com/hardmaru_)
- [https://twitter.com/ylecun\\_](https://twitter.com/ylecun_)
- [https://twitter.com/jeremyphoward\\_](https://twitter.com/jeremyphoward_)
- [https://twitter.com/goodside\\_](https://twitter.com/goodside_)
- <https://twitter.com/emollick>



# Best sources for **News/articles?**

- <https://towardsdatascience.com/>
- <https://techxplore.com/machine-learning-ai-news/>
- <https://arxiv.org/list/cs.AI/recent>
- <https://stability.ai/news>
- <https://paperswithcode.com/latest>
- <https://www.emergentmind.com/>
- <https://www.catalyzex.com/>
- <https://www.deeplearning.ai/the-batch/>



# Where to test out the applications of these models?

- **Huggingface** : <https://huggingface.co/>
- **Replicate** : <https://replicate.com/>
- **Civitai** : <https://civitai.com/>
- **Gooley** : <https://gooley.ai/>

## Podcasts:

- <https://www.youtube.com/channel/UCSHZKyawb77ixDdsGog4iWA>
- <https://www.youtube.com/user/keeroyz>

# Datasets, models etc

- **Kaggle** : <https://www.kaggle.com/datasets?search=gym+exercises>
- **Huggingface** : <https://huggingface.co/>
- **Replicate** : <https://replicate.com/>
- **Civitai** : <https://civitai.com/>
- **StabilityAI**: <https://replicate.com/stability-ai/sd-xl/api>
- **Gooley** : <https://gooley.ai/>
- **PlayGroundAI** : <https://playgroundai.com/>

# The Ritual

- Every Friday lecture begins with AI news of the week
- Whenever you come across something interesting, post on Discord. Try doing 1 post a day.
- Scroll through twitter at least for 20-30 mins during breaks/commute



# Sorting Ceremony

Harry Potter  
Style

# Tracks and Mentorship

Playground AI



**QnA**