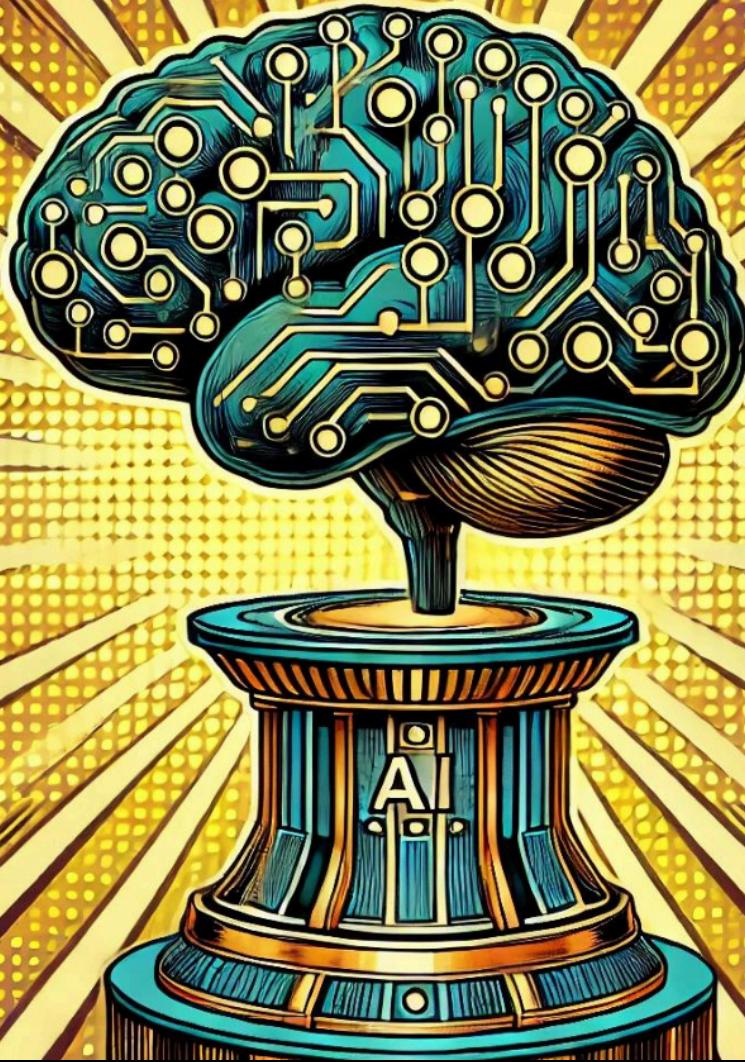


LLM Engineering

MASTER AI & LARGE LANGUAGE MODELS



Big Conclusion of Week 2

What you can now do

- Describe transformers and explain key terminology
 - Confidently code with the APIs for GPT, Claude and Gemini
 - Build an AI Assistant using Tools for enhanced expertise
-

Today is huge!

- Describe Agents
- Explain how Agents can carry out sequential activities
- Complete a multi-modal AI Assistant with Agents and Tools

DEFINING AGENTS

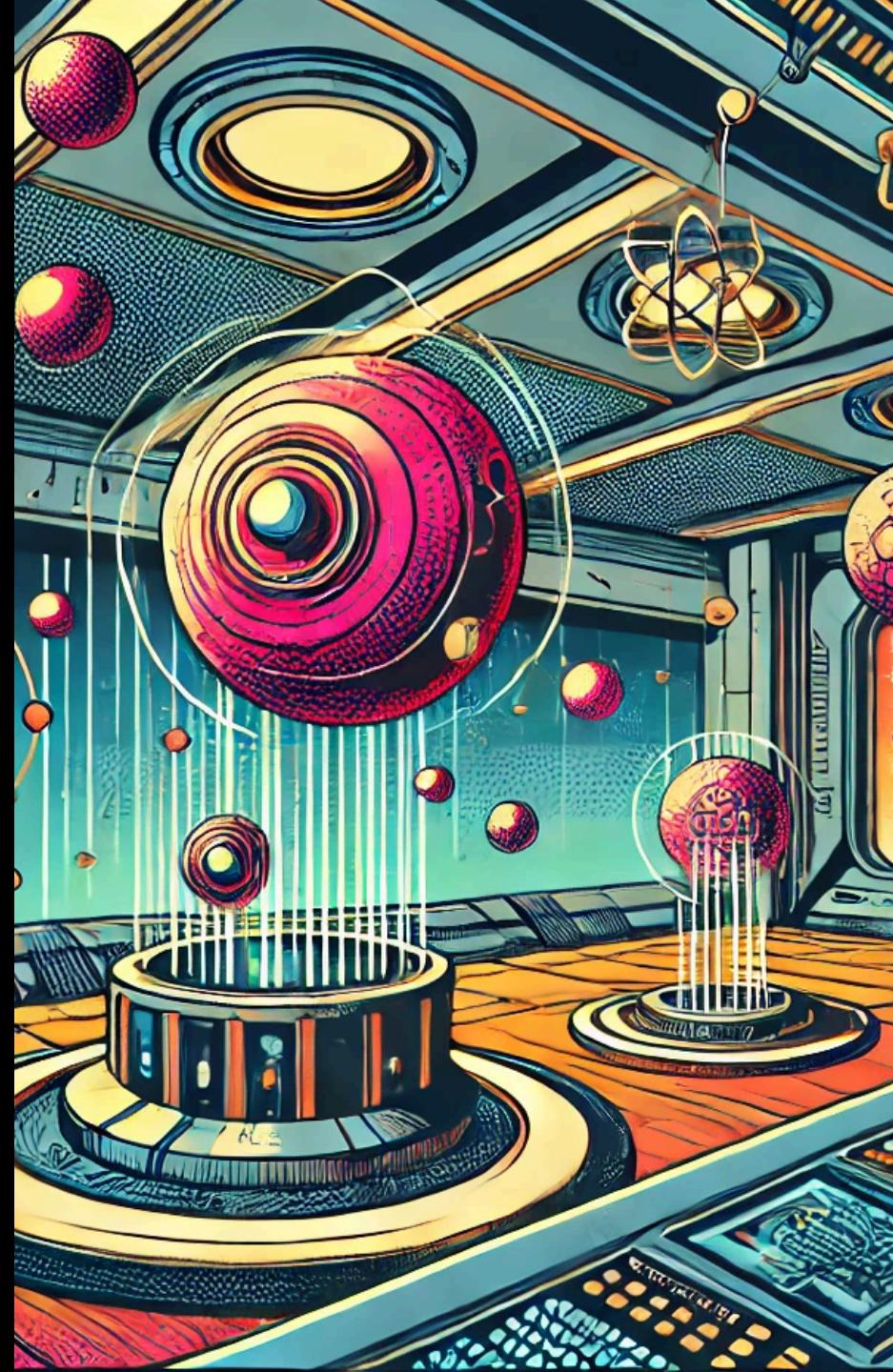
Software entities that can autonomously perform tasks

Common characteristics of an Agent

- Autonomous
- Goal-oriented
- Task specific

Designed to work as part of an Agent Framework to solve complex problems with limited human involvement

- Memory / persistence
- Decision-making / orchestration
- Planning capabilities
- Use of tools; potentially connecting to databases or the internet



What we are about to do



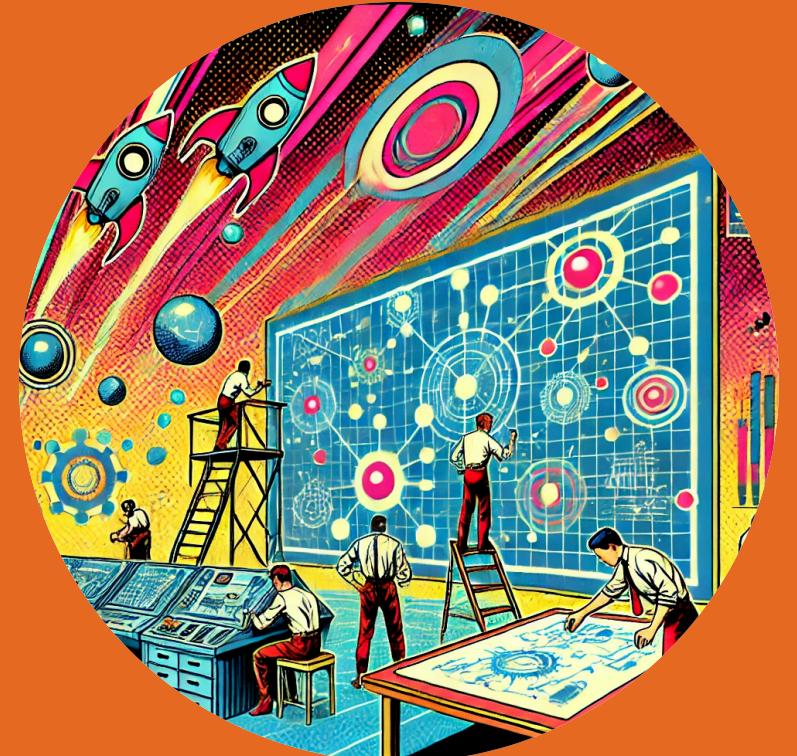
Image Generation

Use the OpenAI interface to generate images



Make Agents

Create Agents to generate sound and images
for our store



Make an Agent Framework

Teach our AI Assistant to speak and draw

The AI Assistant has new skills

Chatbot

Hello! How can I assist you today?

I'd like to travel to London

Sure! Would you like to know the ticket price for a return trip to London?

yes please

A return trip to London costs \$799. Would you like to book a ticket?

Enter your message

|

Clear

Image



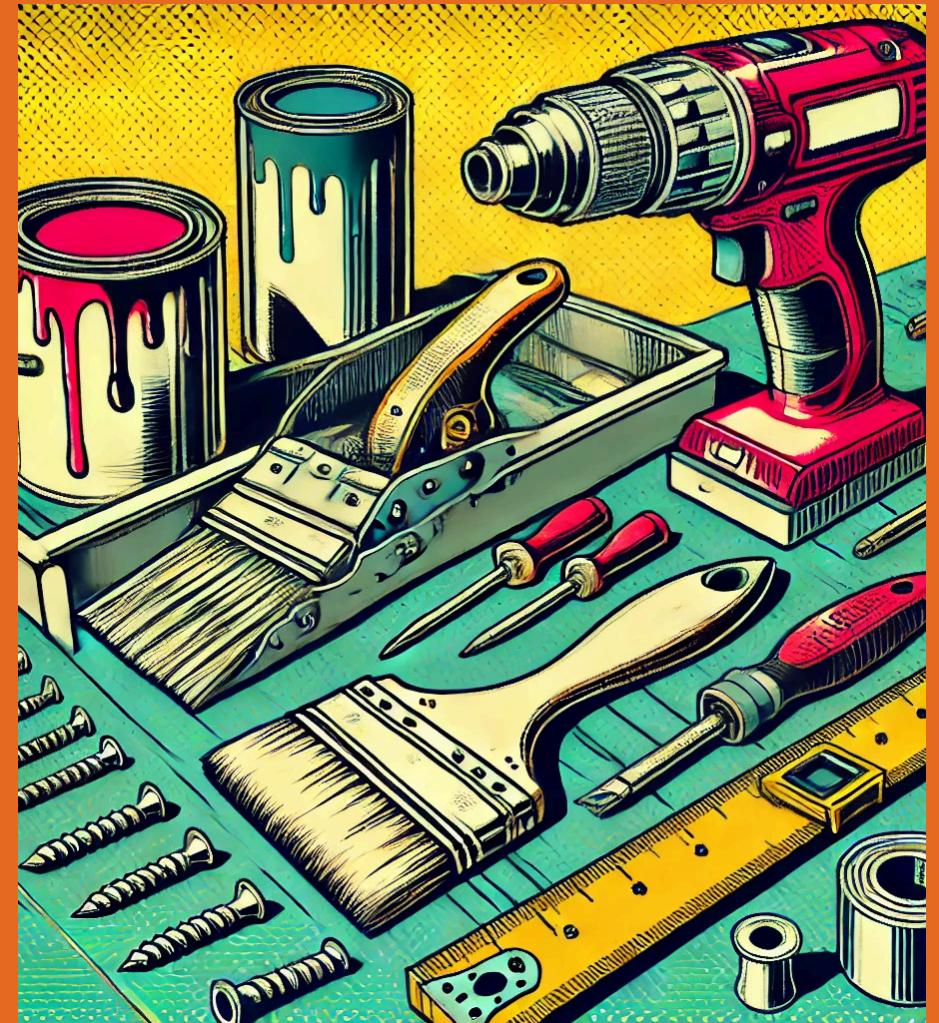
Congratulations! Week 2 Challenge For You:

Add more Tools / Agents to enhance capabilities:

Add another Tool to make a booking

Add an Agent that translates all responses to a different language and shows on the right hand side, using a different Frontier model

Add an Agent that can listen for Audio and convert it to Text



Twenty-Five Percent To Mastery

What you can now do

- Describe transformers and explain key terminology
 - Confidently code with the APIs for GPT, Claude and Gemini
 - Build a multi-modal AI Assistant with UI, Tools, Agents
-

Week 3 is all about Open Source models

- Know the HuggingFace platform inside and out
- Work with HuggingFace tokenizers, pipelines and transformers
- Run inference of Open Source models on GPUs in Google Colab