

## AI and Python - Ollama for Local LLM AI Usage

### This Still Isn't AI...

- AI is a buzzword for investors...
- You need a correct Frame of Reference to find solutions...
- Turning Objects into text...

### AI is HARD, API's are NOT

- The smartest minds of a generation accessed with 10 lines of code...

## What is Ollama

- Framework for running LLM's on your local system
- Run from CLI
- REST API and cURL
- And Python Module
- Model Quantization
  - Compression so it runs on your system
  - Personal llama2 experience...
  - <https://symbl.ai/developers/blog/a-guide-to-quantization-in-llms/>

## Models

- Models are trained for types of tasks.
- Smaller models run on worse machines
- <https://ollama.com/library>
- License -
  - <https://ollama.com/library/llama3.1>
- <https://ollama.com/library/samantha-mistral>

## Installing

- <https://ollama.com/>

## Running from CLI

- ollama
- pull
- list
- run
- /bye

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## Python

- python3 -m pip install ollama
- Ollama must be running
- Ollama configures to run at startup
- The model has to be downloaded, but does not need to be running

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## Text - Prompting

- Roles
- Example = ollama-python.py

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## Image Recognition - LLaVA

- ollama pull llava
- <https://llava-vl.github.io/>
- jpg or png
- Example = ollama-image.py

## cURL

```
curl --location 'http://localhost:11434/api/generate' \  
--data '{  
  "model": "llama2:7b",  
  "prompt": "what is a pbj sandwich",  
  "stream": false  
'
```

## Labs

- lab-chat.py
  - Talk to your AI
- lab-chat-memory.py
  - Give your AI a memory
- lab-image.py
  - Create a Title, Description and CSV formatted Tags for image