

# LLM Engineering

## MASTER AI & LARGE LANGUAGE MODELS





PROGRESS REPORT

# Showtime

## **What you can do ALREADY**

- Write code to call OpenAI's frontier models & summarize
  - Contrast the leading 6 Frontier LLMs
  - Discuss transformers, tokens, context windows, API costs and more!
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## **What you'll be able to do BY END OF TODAY**

- Confidently code with the OpenAI API
- Use one-shot prompting, streaming, markdown & json results
- Implement a business solution - in a matter of minutes

## BUSINESS PROBLEM

# Company Sales Brochure Generator

**Create a product that can generate marketing brochures about a company**

- For prospective clients
- For investors
- For recruitment

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### The technology

- Use Open AI API
- Use one-shot prompting
- Stream back results and show with formatting



# Revisiting the environment setup instructions



## Clone the Repo

See the Green Code button in Github



## Follow the README

Anaconda is recommended

Using a .env file is recommended

Then run: jupyter lab



## Create an OpenAI key

Link is in the README

Monitor Usage and Billing - should be extremely low for this class!

# ACTION!

00:10

# Congratulations! Week 1 Challenge For You:



**For the first call to make links:**

Try extending to multi-shot prompting

**For the second call to make the brochure:**

Add more instructions to provide the Brochure in a particular format, with sections you specify

**And:**

Make a third call to an LLM to translate the entire brochure to Spanish



MAJOR ACCOMPLISHMENT

# 1 week complete!

## What you can do

- Describe transformers, tokens, context windows, API costs etc
- Contrast the leading 6 Frontier LLMs
- Confidently use the OpenAI API including streaming with markdown and JSON generation

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## After next week you will be proficient with Frontier Model APIs

- Use APIs for OpenAI, Anthropic and Gemini
- Work with Agents
- Implement a customer support agent with a Chat UI!