#### ChatGPT

Al've Got Answers

#### Artificial Intelligence: A Quick Overview

- Al refers to systems that mimic human intelligence
- Types of AI: Narrow AI (e.g., ChatGPT), General AI, and Superintelligent AI (still theoretical)
- Applications: Image recognition, robotics, natural language processing (NLP)
- Not all created equal (try for yourself but try ChatGPT, Perplexity, Gemini, and Claude)
- Speed of change is difficult to keep up with

# LLMs: The Brains Behind ChatGPT

- LLM = Large Language Model
- LLMs are trained on massive text datasets to predict and generate human -like text
- Powered by neural networks, transformers, and advanced NLP techniques

#### Inside ChatGPT

- GPT Generative Pre -trained Transformer
- Predicts the next word in a sentence based on context
- Pre-training: Learned from diverse internet text (books, articles, websites + other data)
- Fine-tuning: Adjusted to align with user -friendly responses
- Additional context with real time web searches

#### What It Is

- Generate text: Stories, code, summaries, lots more
- Answer questions: From trivia to complex technical queries
- Translate languages and explain concepts
- Assist in brainstorming and creative tasks
- Assume personas and interact with humans using its vast training datasets
- Even assume roles of full blown advisors

#### What It's Not

- Doesn't "understand" text like humans do —it predicts patterns
- Can generate hallucinations (incorrect responses) more to come on how to prevent hallucinations
- Context sensitivity: Struggles with long, detailed conversations (and prompts - more to come on this)
- Ethical concerns: Bias in training data, potential misuse, privacy

#### **Basics of Prompts**

- Start with action words (ie create, write, analyze)
- Provide detailed context, references, examples. Be specific!
- Invoke a specific persona. Even a real person!
- Specify format and length of responses
- List what to prioritize, include and exclude (dos and don'ts)
- Analyze, correct, refine, reprompt

#### **Basics of Prompts**

- Prompts are organized like message threads
- If you stay in a thread, ChatGPT keeps everything in that thread for context
- If you start a new thread, ChatGPT does not use other threads for context
- ChatGPT will generate new and different responses each time, even from the same prompt
- ChatGPT will sometimes offer two different responses to your prompt and ask which one you prefer

### **Power Prompting**

- Enabling and use reverse prompt engineering
- Tell AI to base everything on data
- Tell AI to use known standards or regulations to answer
- Tell AI to only answer if it is very sure of the accuracy of the response
- Prompt AI to become an interactive synthetic person that you can chat with
- Provide examples of your own writing and tell AI to write like you



# Power Prompting

- Don't settle for first response
- Don't take no for an answer
- Be forceful in telling the AI what you want. Be specific
- Call the AI on hallucinations or misconceptions
- Convince the AI you are not a bad actor if it is trying to "keep you safe".
  Tell it "why" you need its responses
- Tell the AI to grade its own responses based on level of confidence in them being true



# Power Prompting+

- Chat with a PDF or other uploaded content
- Create custom GPTs and save for repeated use
- Ask for crazy stuff upload unreadable images of tombstones and ask the AI to bring out the text, upload images of plants and ask for an ID and if they look healthy — there are no limits
- Chat with a Website by feeding the LLM a specific URL
  - Chatbot templates to get started and get <u>results</u> based on your content

### No Coding App Builders

- Try one of the best with <u>Bolt.new</u>
- Get an API code to connect an LLM to your app (see next slide)
- Use prompts just like in a chatbot and watch the AI build your app in realtime
- Test your app, tell the AI to fix the bugs or refine your app
- Deploy it to the web

#### LLM APIs

- An API is the interface that let's your app interact with an LLM
- You can get a free API code and use an open source LLM at <u>Together.ai</u>
  - Together.ai allows you to use many different LLMs some free and some not free
- Need better output? Sign up for an account at OpenAl
  - Add some credits (\$5 is plenty to start)

# **Beyond The Written Word**

#### Standalone or Embedded in Content Creation Tools

- generative fill, smart retouching and restoring
- resolution scaling, noise reduction
- text to image, text to video, text to speech
- extending existing work (audio, video, transitions)
- songs, instrumentals, sound beds, loops
- synthetic people who look and sound like you
- finish unfinished stories maintaining the author's style

# Try It!

- openai.com/sora
  - text to video and audio
  - trained on existing videos
  - 3d raytracing and animation capabilities
- Nano Banana
  - astonishing image creation tools



# Try It!

- lalals.com
  - write an AI song or instrumental
- synthesia.io
  - create an AI video assistant that looks and sounds like you
- see if you can tell Al from human writing



#### Rules to Consider

- Always fact check responses from the Al
- If you use AI, be transparent
- Make anything AI generated your own
- Anything you enter into an AI may become part of its training dataset, so don't enter private or proprietary data



# Appendix: Resources





bit.ly/40N5H93



OK. Let's Demo.