CHATGPT FOR DEVELOPERS

ChatGPT Dev Talk

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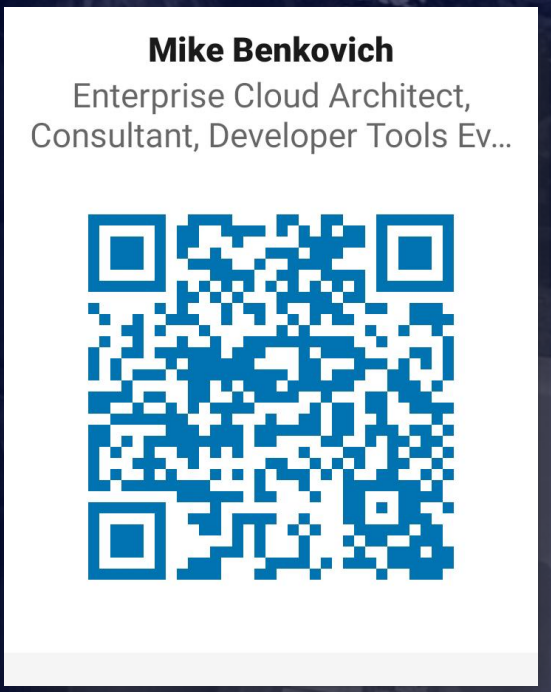
- Azure **Office Hours** on Fridays! https://bit.ly/BnkAzHrs



AI - helps you make mistakes much faster and in more interesting, expensive ways.

Today…

Hello ChatGPT

Large Language Models

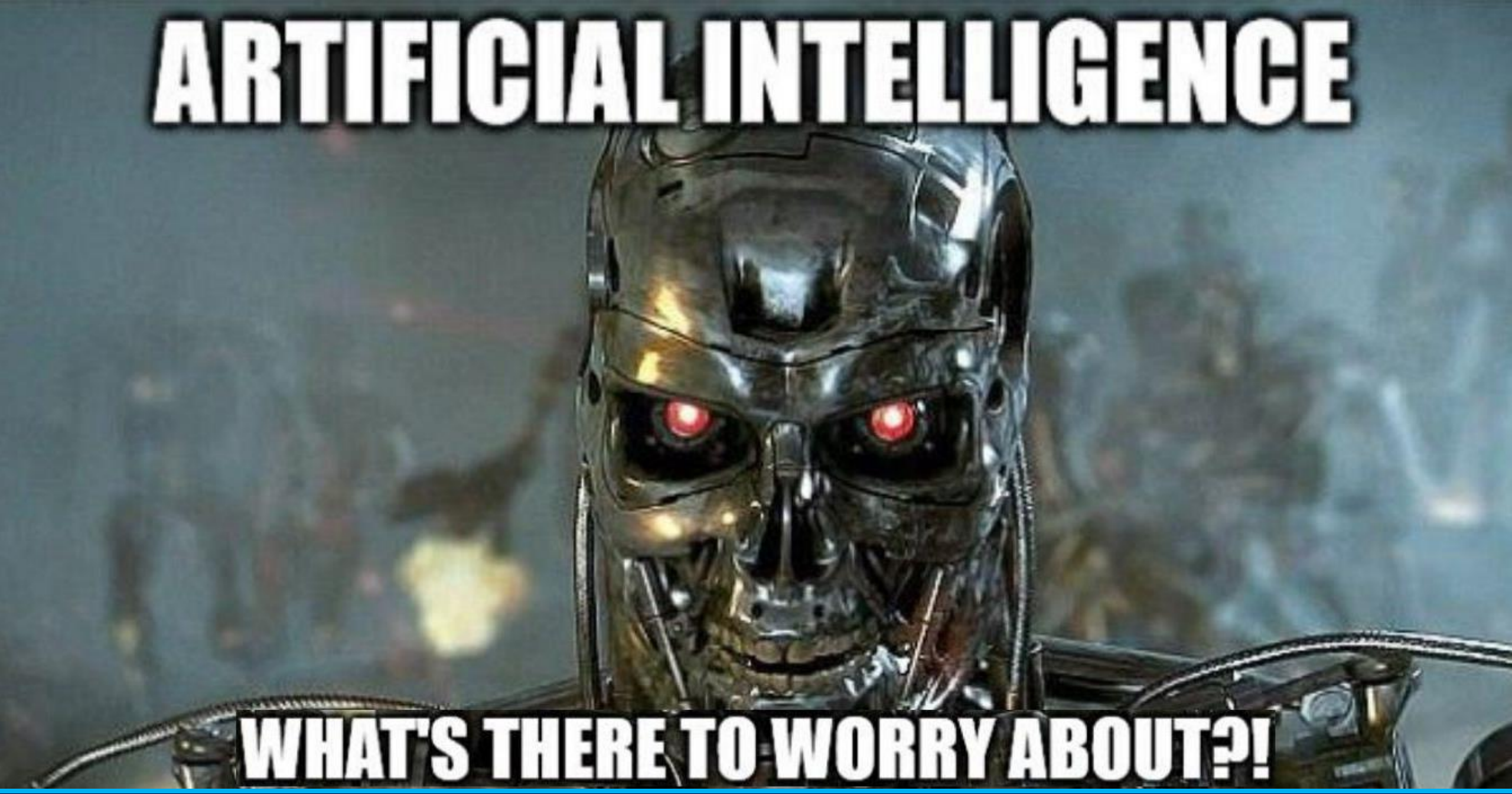
Chat and Co-pilots

OpenAI Service

Prompt Flow

Next steps…

Sensitivity: Confidential



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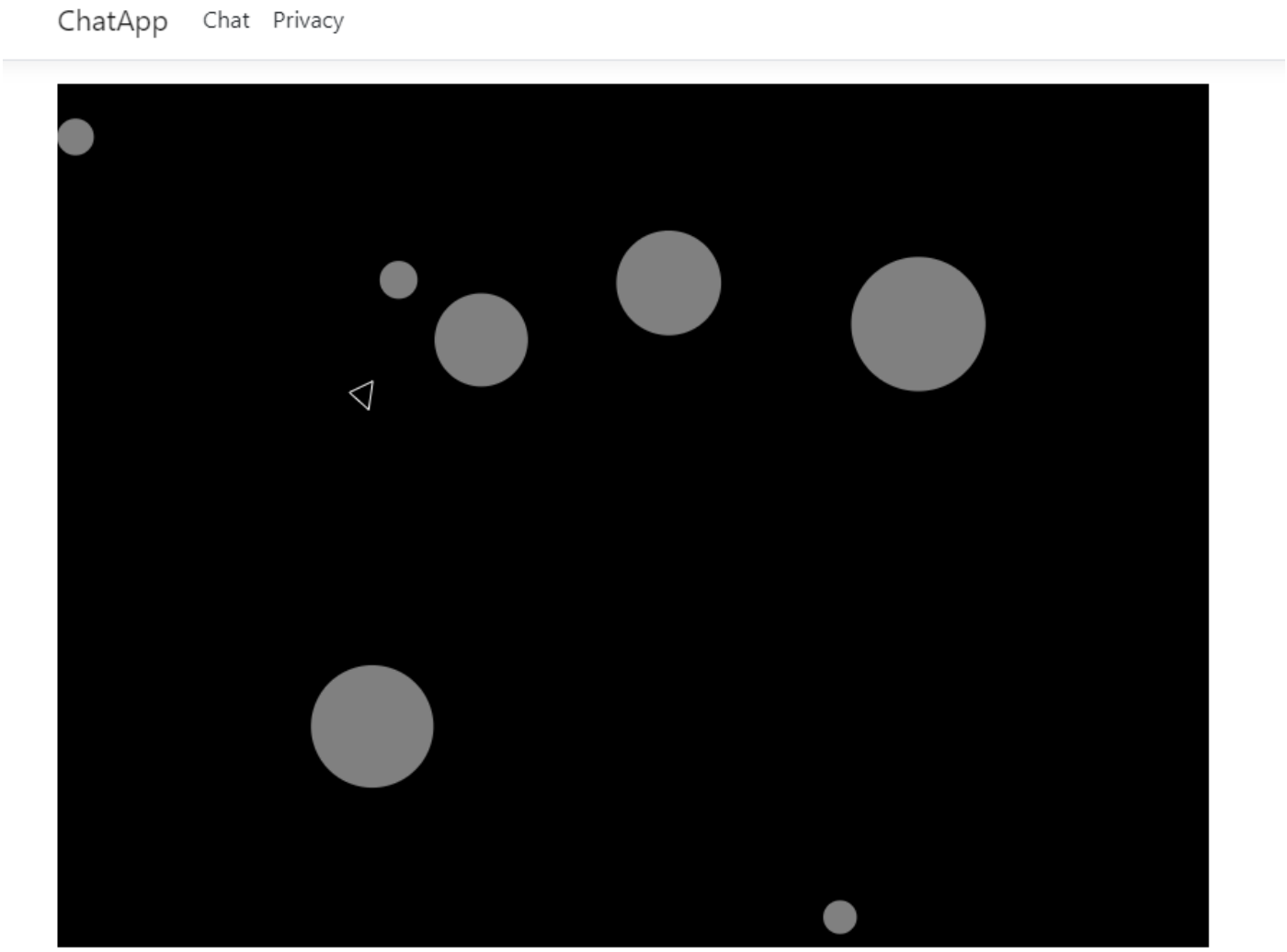
Let’s play a game



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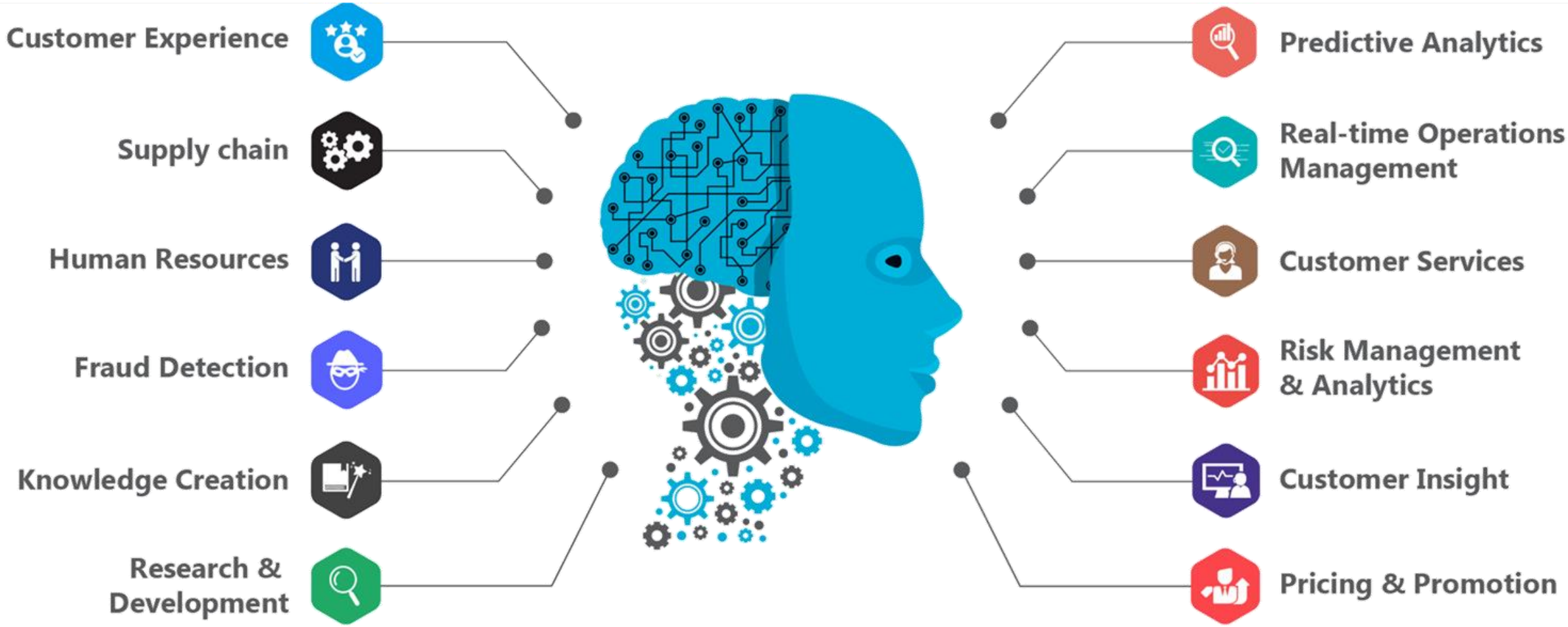
There are only 10 kinds of people
those who understand binary
and those who don’t.

AI Scenarios



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What is a LLM

Prediction engine

What comes next?

What do I know about you?

How do I figure it out?

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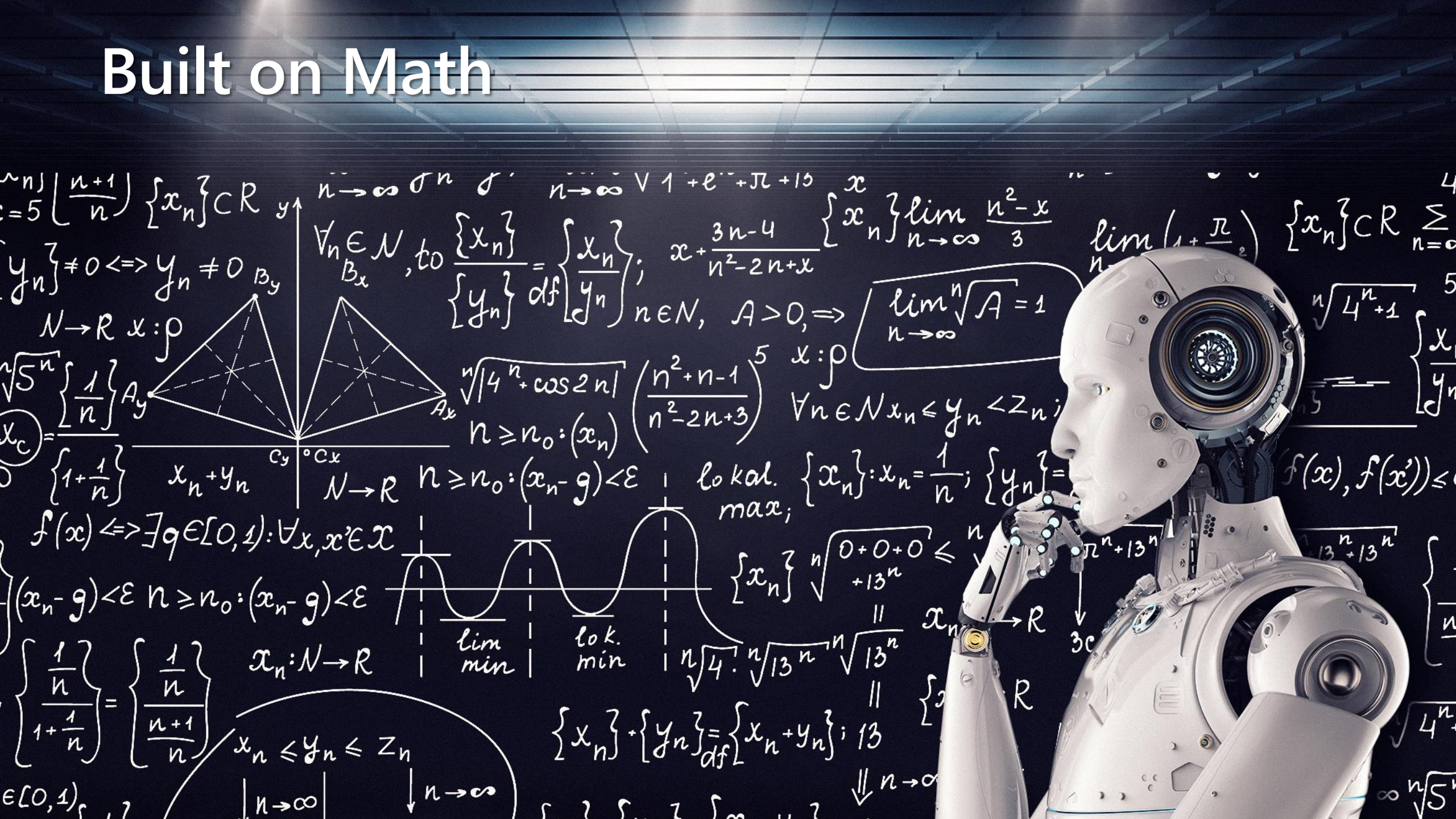
Built on Math



GPTs *(generative pre-trained transformer)*

Provide text outputs in response to inputs

Code generation

Summarization

Conversation

Creative writing

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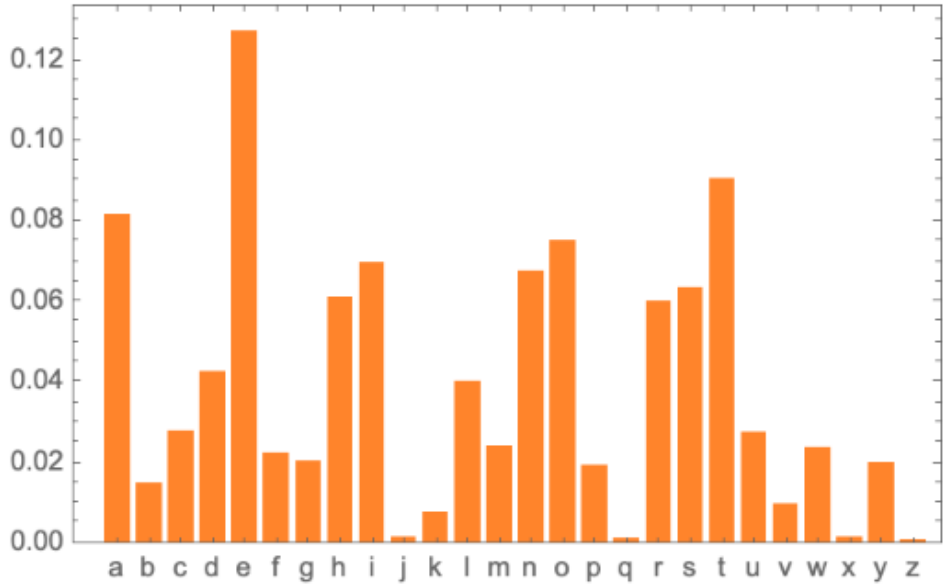
What comes next?



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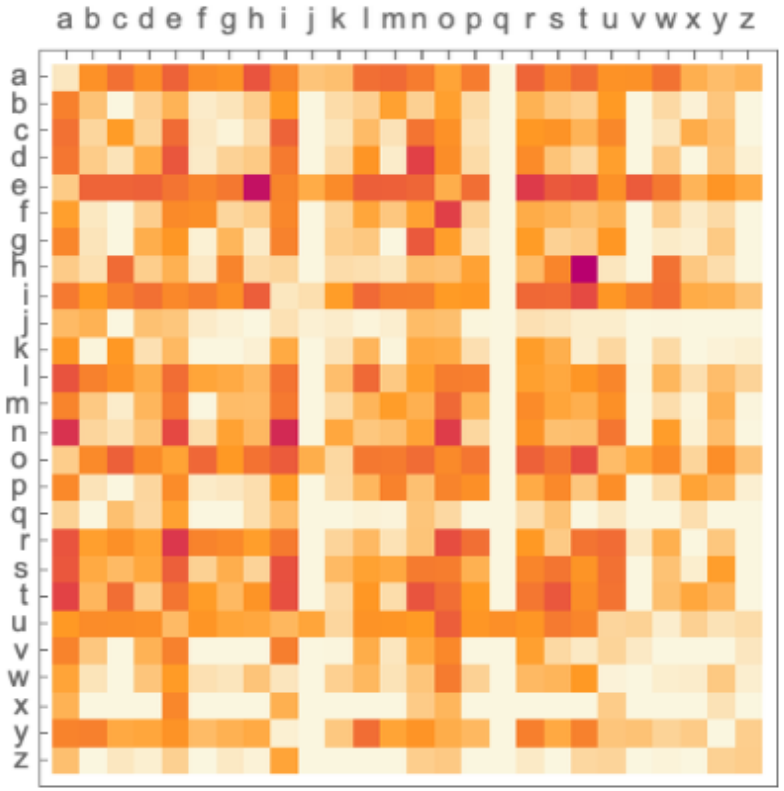
2-grams … i.e. pairs of letters



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Large Language Models

Prediction engine

what comes next?

Neural Network

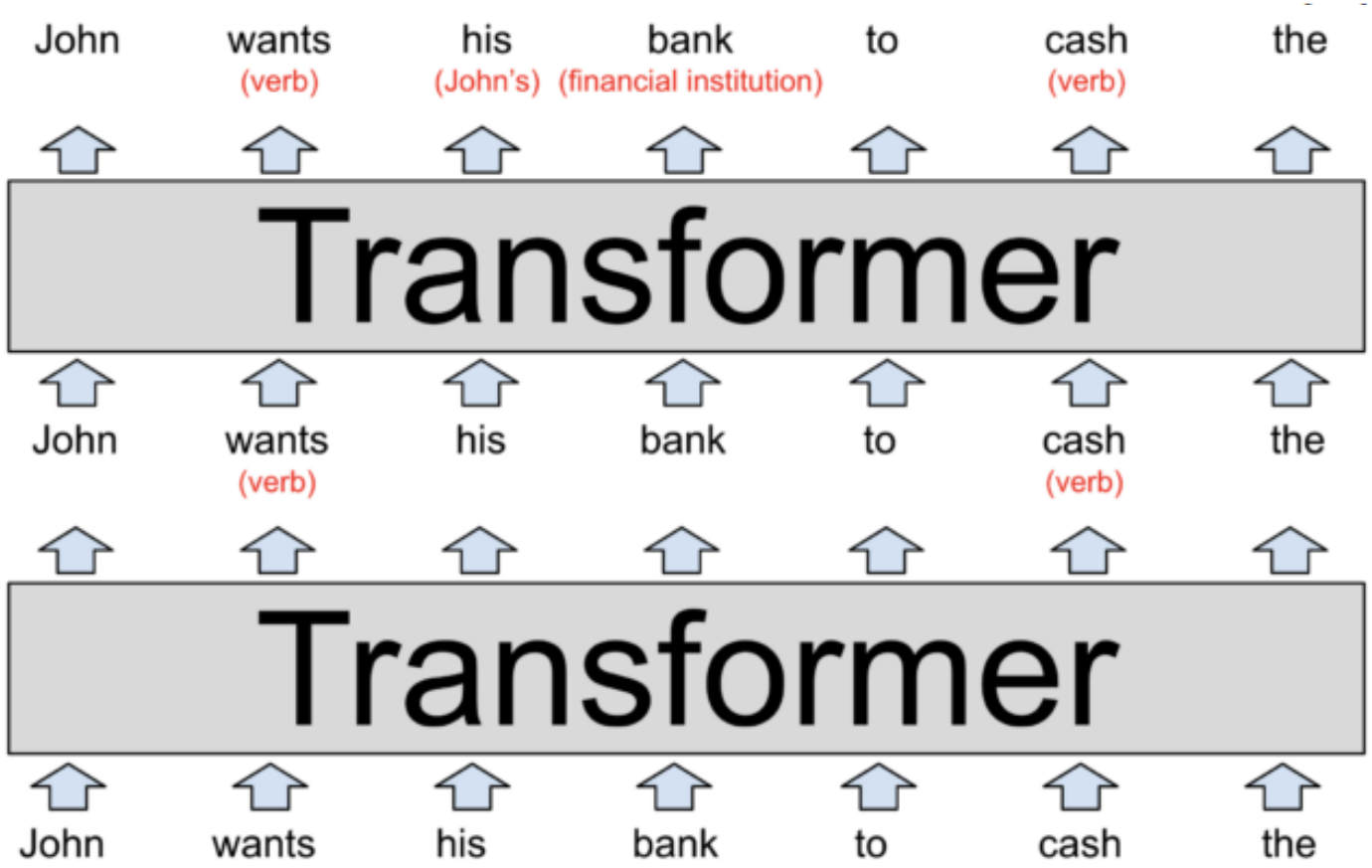
Google word2vec project 2013

Word Vector Based

GPT-3 uses word vectors with 12,288 dimensions

Transformer Layers

GPT-3 has 96 layers, with 96 attention heads = 9,216 ops to predict a new word



10. rat NOUN 0.5348

- *We show only the associates of the same part of speech as your query. All associates can be found at the Similar Words tab.*

[A jargon-free explanation of how AI large language models work | Ars Technica](https://bit.ly/arsLLM1) - https://bit.ly/arsLLM1

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History of GPT

GPT-1: **The First step** *(2018) 110 million parameters*

GPT-2: **The Sequel** *(2019)* 1.5 billion parameters

GPT-3: **The Game Changer** *(2020)* 175 billion params

GPT-3.5: **The Awakening** *(2021)*

GPT-4: **And Beyond…**

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Prompts and Tokens

https://platform.openai.com/tokenizer

Vector Databases

RAG – Retrieval Augmented Pattern

Prompt Flow

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Dovetail jig

Automation *(verb)*

Why spend 6 minutes doing something by hand when you can spend 6 hours failing to automate it?

import { fetch } from "fetch-h2";
// Determine whether the sentiment of text is positive
web service
tion isPositive(text: string): Promise<boolean> {
onse
"POST",
`text=${text}`,
headers: {
"Content-Type": "application/x-www-form-urlencoded",
GitHub Copilot

Copilot

How can I help?

Pay atterntion…

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Now is not the time for fear

That comes later.

OpenAI
Microsoft

Flow-created-on-... Chat

Runtime * managed-runtime-01

Bulk test | Chat

+ LLM | + Prompt | + Python | + More tools

chat llm

Show variants

Connection: No connection available + Add connection

deployment_name | temperature: 0.7 | stop | max_tokens: 256

Advanced

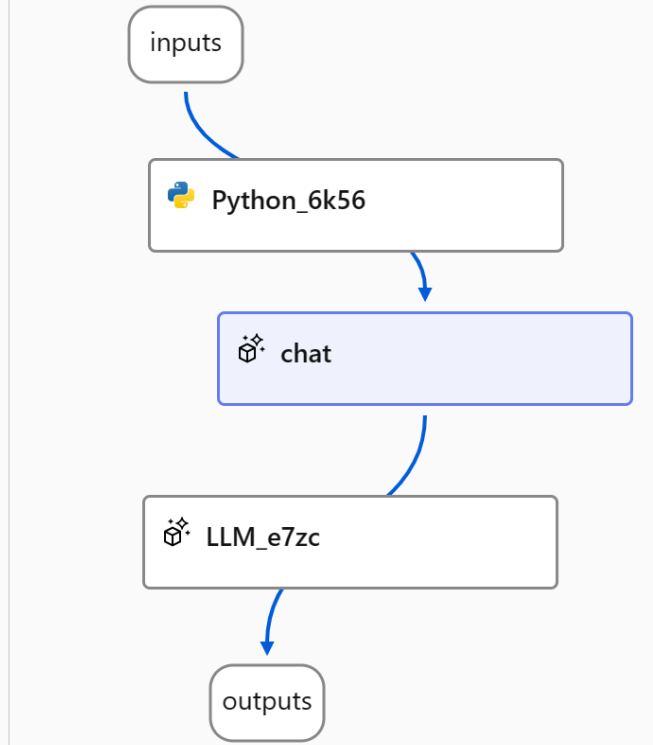
top_p | presence_penalty | frequency_penalty | logit_bias

Prompt Wrap text Diff mode

```
1  system:
2  You are a helpful assistant.
3
4  {% for item in chat_history %}
5  user:
6  {{item.inputs.question}}
7  assistant:
8  {{item.outputs.answer}}
9  {% endfor %}
10
11 user:
12 {{question}}
```

Inputs Validate and parse input

Name	Type	Value
question	string	${inputs.question}



100%

Lessons learned

Fear not…Try

Learn to ask better questions

Do the right things

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Doing things right

is not the same as

Doing the right things

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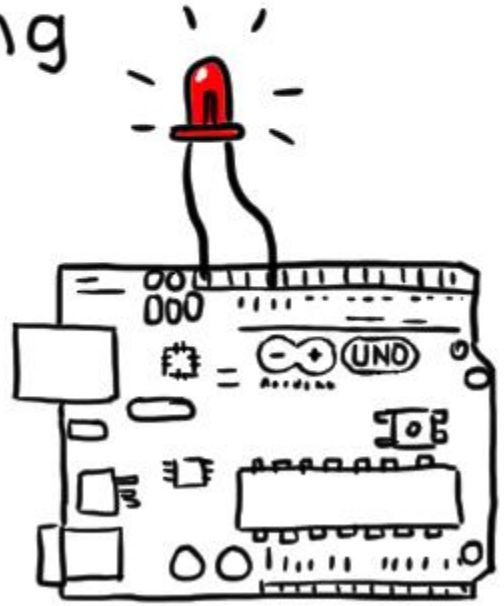
Just finished my first Arduino project:
A blinking led.



Next Step:
Update my LinkedIn profile.

Add Skill

Mechatronic Engineer

http://turnoff.us/geek/arduino-project/

Call to Action – Where can I get more info?

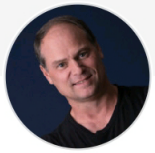
Visit my blog

www.benkotips.com

Schedule a **workshop** to make your IT workforce cloud aware

mike@benko.com

Try it out with **low hanging fruit** white chips



Mike Benkovich

Enterprise Cloud Architect, Consultant, Developer Tools Ev...

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Conclusion

The **journey** to the cloud can be challenging

Take it a **step** at a time

Be aware of the **tools** that can ease the way

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Life’s a journey, enjoy the ride!

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References

- What Is ChatGPT Doing … and Why Does It Work?—Stephen Wolfram Writings
- Seth Juarez – Roshambo

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ChatGPT Mastery CheatSheet

Made by @hasantoxr

Key Use Cases

• Summarizing	long text, transcripts, articles, reports
• Brainstorming	ideas, outlines, new concepts
• Synthesizing	insights and takeaways from text
• Writing	blog posts. articles. press releases. procedures, etc
• Coding	scripts and small programs.
• Extracting	data and patterns from messy text.
• Reformatting	text/data from messy text to tables/structure

Tones

"Tone: [x]"
"Writing using [x] tone"

CONVERSATIONAL
LIGHTHEARTED
PERSUASIVE
SPARTAN
FORMAL
FIRM

Format

- "Be concise. Minimize excess prose.*
- "Use less corporate jargon."
- *Output as bullet points in short sentences."
- *Output as a table with columns: (x), (y), (z), [a]
- "Be extremely detailed."

Modes

1. Intern: "Come up with new fundraising ideas."
2. Thought Partner: "What should we think about when generating new fundraising ideas?"
3. Critic: "Here's a list of 10 fundraising ideas I created. Are there any I missed? Which ones seem particularly good or bad?"
4. Teacher: "Teach me about [x]. Assume I know [x] and adjust your language.

Chained Prompting

- Write an article about ChatGPT
- First give me the outline, which consists of a headline, a teaser, and several subheadings.
[Output]
- Now write 5 different subheadings.
[Output]
- Add 5 keywords for each subheading.
LOutput]

Prompts for Marketers

- Can you provide me with some ideas
- for blog posts about [topics.
- Write a product description for my product or service or company]
- Suggest inexpensive ways I can promote my [company] without using social media.
- How can I obtain high-quality backlinks to raise the SEO of [website name]

Prompts for Designers

- Generate examples of UI design requirements for a [mobile app].
- How can I design a [law firm website] in a way that conveys [trust and authority].
- What are some micro-interactions to consider when designing fintech app.
- Create a text-based excel sheet to input your copy suggestions. Assume you have 3 members in your UX writing team

Prompts for Developers

- Develop an architecture and code for a (descriptions website with JavaScript.
- Help me find mistakes in the following code <paste code below».
- I want to implement a sticky header on my website. Can you provide an example using CSS and JavaScript?
- Please continue writing this code for JavaScript <post code below»

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