## Words, Numbers, Images

Session 2

## Etiquette

Cameras on - show your face
(1) Mute yourself when not talking

울 Drop your questions in the chat + "raise" your hand during questions time

Don't give up: Something isn't clear? Get in touch.
O Be nice!

## Home Work: Build a Simple App

1. Generate code with ChatGPT. You can begin by asking it something like: "Generate an html snippet for an app that does...."
2. ChatGPT might give you two (or more) pieces of code for different files. If it does, ask it to provide a single snippet of code.
3. To test your code, go the HTML / JavaScript Tester.
4. Click on "Show your output" at the top of the screen. See and test your result in the lower right corner.
5. Does it work? Want to make it even better? Go back to ChatGPT and instruct it on any changes you'd like.
6. Repeat until you're happy with your app.
7. Once you're done, post your code on the Slack \#show-your-work channel.


## Nice work!



## Course Portal

Log in with your email at https://in.hypefree.com
hYPE-FREE COURSE PORTAL

## Session 1: The Current State of AI

30 MAY $2023-1$ MIN READ

It was great to see everyone in today's session. Below you can find the recording, the slides, a link to the course chatroom, and your homework.

Session Recording

The Current State of AI
Session 1

## What we'll do?

H Session 1: Fundamentals andorientation

* Session 2: Working with words, numbers, and images

Session 3: Reinforcement \& Support

Session 4: Broader implications for industries and careers
\% Session 5: Advanced skills, specialized tools, and automations
Session 6: Reinforcement \& Support

## Understanding Tokens

- Token: A unit of text that the model reads and generates.
- Can be as short as one character, or as long as one word. For example, in the sentence "ChatGPT is great!", there are four tokens: "ChatGPT", "is", "great", and "!".
- Tokens are also the units by which the model learns during training: it learns to predict the next token in a sequence given the previous tokens.
- GPT 3.5 token limit: 2048; GPT-4: 8192 (or 32,768 )


## Tokenizer

The GPT family of models process text using tokens, which are common sequences of characters found in text. The models understand the statistical relationships between these tokens, and excel at producing the next token in a sequence of tokens.
You can use the tool below to understand how a piece of text would be tokenized by the API, and the total count of tokens in that piece of text.
GPT-3 Codex

$$
\begin{aligned}
& \text { Prior to the NBA draft, Tatum reluctantly showed up to mork out with the } \\
& \text { Boston Celitics. He showcased some of his skills but didn't necessarily } \\
& \text { shoot the lights out, But during this short visit, he managed to showcase } \\
& \text { sonething else as well. As Coach Brad Stevens described it, "He would } \\
& \text { miss two in a row, and it mouldn't dissuade him from hitting the next }
\end{aligned}
$$

$$
\begin{aligned}
& \text { miss t } \\
& \text { one. }
\end{aligned}
$$

## Clear Show example <br> Tokens Characters <br> 78 <br> 362

Prior to the NBA draft, Tatum reluctantly showed up to work out with the Boston Celtics. He shomcased some of his skills but didn't necessarily shoot the lights out, But during this short visit. he managed to
showcase something else as well. As Coach Brad Stevens described it, "He would miss two in a row. and it wouldn't dissuade hin from hitting the next one.
text toxenids
A helpful rule of thumb is that one token generally corresponds to $\sim 4$ characters of text for common English text. This translates to roughly \% of a word (so 100 tokens $\sim=75$ words).

If you need a programmatic interface for tokenizing text, check out our tiktoken package for Python. For JavaScript, the gpt-3-encoder package for node.js works for most GPT-3 models.

## Understanding prompts

Prompt: A text-based instruction or input given to a language model. It serves as a starting point or guidance for the model to generate a response or continuation based on the provided prompt. The prompt can be a question, statement, or incomplete sentence that helps to frame the desired output from the model.

Questions so far?

Working with Words

## Analyzing Text



Talent, Scarcity, and Culture
How does talent distribution impact corporate culture and the future of work?

## Reviewing a Contract

## EMPLOYMENT CONTRACT

This Employment Contract (this "Contract") is made effective as of March 01, 2022, by and between Hype- Free Media (DBA of Eloquent.li LLC) of $\qquad$ and $\qquad$ of $\qquad$ New York, $\qquad$ —.
A. Hype-Free Media (DBA of Eloquent.li LLC) is engaged in the business of online education and media production. $\qquad$ will
primarily perform the job duties at the following location: ... $\qquad$ _.
B. Hype-Free Media (DBA of Eloquent.li LLC) desires to have the services of $\qquad$ -.
C. $\qquad$ is an at will employee of Hype-Free Media (DBA of Eloquent.li LLC). Either party is able to terminate the employment
greement at any time.

Therefore, the parties agree as follows

1. EMPLOYMENT. Hype-Free Media (DBA of Eloquent.li LLC) shall employ $\qquad$ as a(n) Program Manager $\qquad$ shall provide to Hype-Free Media (DBA of Eloquent.li LLC) duties as needed. $\qquad$ accepts and agrees to such employment, and agrees to be subject to the general supervision, advice and direction of Hype-Free Media (DBA of Eloquent.li LLC) and Hype-Free Media (DBA of Eloquent.li LLC)'s supervisory personnel.
2. BEST EFFORTS OF EMPLOYEE. $\qquad$ agrees to perform faithfully, industriously, and to the best of
's ability, experience, and talents, all of the duties that may be required by the express and implicit terms of this Contract, to the reasonable satisfaction of Hype-Free Media (DBA of Eloquent.li LLC). Such duties shall be provided at such place(s) as the needs, business, or opportunities of Hype-Free Media (DBA of Eloquent.li LLC) may require from time to time.

Blood Test
Just for fun! Not medical advice!


## Browsing the Web



```
4 GPT-3.5
* GPT-4
```

Our most capable model, great for tasks that require creativity and advanced reasoning.

Available exclusively to Plus users
** Default
(4) Browse with b Bing Beta

Plugins Beta

## ChatGPT Plugins



## Using BabyAGI "agents"

```
$/\mp@code{cognos%s}
@ Home
$ Settings
̊) Agents
```


## Create your agent

Name
Author
Objective


Mode


Automatically generate tasks

Start Agent

## Or get started with a template

Questions so far?

## Group Activity - 7 minutes:

Introduce yourself and then use ChatGPT together to... convince me to buy this pen.

Use whatever you know about me, feel free to make assumptions, ask ChatGPT for help.


## Group Activity - 7 minutes:

Introduce yourself and then use ChatGPT together to... convince me to buy this pen.

Use whatever you know about me, feel free to make assumptions, ask ChatGPT for
 help.

Working with Numbers

## Financial Analysis

| Rental Property Cashflow <br> File Edit View Insert Format Data Too |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\leftrightarrows$ | ¢ 吕 | 100\% | \$ \% . $0_{\leftarrow} .00$ | $\xrightarrow{00} 123$ | Defaul... | $-10+$ | B $I \sim$ | $A \quad \lambda$ |
| D15 | - fx |  |  |  |  |  |  |  |
|  | A | B | c |  | D | E | F | G |
| 1 | Year | Gross Rental Inc | c Operating Exper | Net Op | erating Income | Debt Service | Cash Flow |  |
| 2 | 2023 | 30000 | 8000 |  | 22000 | 5000 | 17000 |  |
| 3 | 2024 | 31500 | 8400 |  | 23100 | 5000 | 18100 |  |
| 4 | 2025 | 33075 | 8820 |  | 24255 | 5000 | 19255 |  |
| 5 | 2026 | 34729 | 9261 |  | 25468 | 5000 | 20468 |  |
| 6 | 2027 | 36465 | 9714 |  | 26751 | 5000 | 21751 |  |
| 7 | 2028 | 38289 | 10189 |  | 28100 | 5000 | 23100 |  |
| 8 | 2029 | 40203 | 10698 |  | 29505 | 5000 | 24505 |  |
| 9 | 2030 | 42213 | 11238 |  | 30975 | 5000 | 25975 |  |
| 10 | 2031 | 44324 | 11799 |  | 32525 | 5000 | 27525 |  |
| 11 | 2032 | 46540 | 12389 |  | 34151 | 5000 | 29151 |  |
| 12 | 2033 | 48867 | 13009 |  | 35858 | 5000 | 30858 |  |
| 13 |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |

## Looking at Tesla’s Financials



Market Research

## Coding in Excel / G Sheets



## Getting basic tax ideas (not tax advice!)

Questions so far?

## Using the OpenAI API



## What is an API?

API (Application Programming Interface): An API is a set of rules that allows different software applications to communicate with each other. It's like a menu in a restaurant: you (the software) make a request (place an order), and the kitchen (the system you're requesting information from) uses the instructions provided (the menu) to fulfill your request. APIs enable the different pieces of software you use every day to function together seamlessly.

## What can it do? (a lot)



## Try it with the API playground



Please review and experiment!

## Homework: Create a Zapier Account



## Create a Pixar Character

## (and learn from a Tweet!)

## 8. Justine Moore ©

I found the perfect long weekend project: turn yourself into a Pixar character.
It takes <15 minutes and three tools (@midjourney, @elevenlabs, @HeyGen_Official), all of which you can use in-browser.

And it's a real crowd pleaser with friends / family!


5:20 PM • May 28, 2023 • 815.6K Views
397 Retweets 43 Quotes 2,536 Likes $\mathbf{4 , 4 2 0}$ Bookmarks
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## Next week:

He Session 1: Fundamentals and orientation
4f Session 2: Working with words, numbers, and images
Session 3: Reinforcement \& Support

Session 4: Broader implications for industries and careers
\% Session 5: Advanced skills, specialized tools, and automations
\& Session 6: Reinforcement \& Support

Thank you!

