



AI 101

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Agenda

- ◆ What is AI?
- ◆ What is the focus for our discussion?
- ◆ How should I use it?
- ◆ Here are the tools I use?



The image features a decorative border at the top and bottom, consisting of a red band with small yellow stars, and a yellow band with vertical purple stripes. The text "In the beginning..." is centered in the white space between these bands.

In the beginning...

- Write and tweak the abstract
 - Have it write the abstract in my voice
- Have it write an outline, adjust it
- Talk about the fork
 - PowerPoint or ChatGPT
 - We'll come back to PowerPoint
- Have it make slides, it can't
- Have it write PowerShell to make slides
 - Fix the path
 - Fix the layout
 - Add speaker notes
 - Add pictures
- Do it in PowerPoint
 - Might have to paste the outline in in pieces
 - Add speaker notes by slide number

What is AI?

AI is many things

NLP - Natural Language Processing

ML - Machine Learning

CV – Computer Vision

It learns like humans do, for better or worse

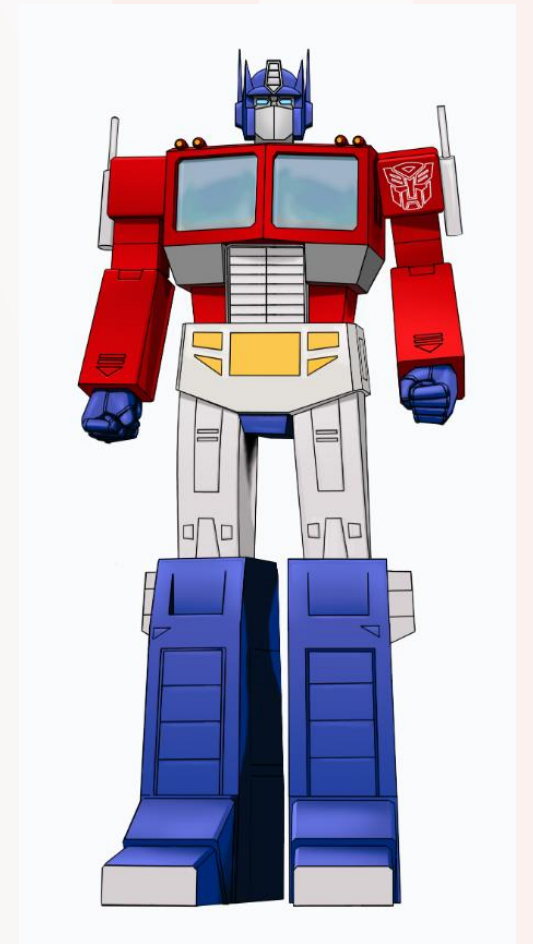
ChatGPT read the whole internet in December of 2023

Some Terms

- ◆ Neural Network – Like our brains
- ◆ Nodes – Like a neuron
- ◆ Parameter – Weights on connections
- ◆ Hallucinations – Stuff the AI imagined
- ◆ Temperature – Higher, more random, lower, more real
- ◆ Alignment – Are AI and humans' outcomes aligned?
- ◆ Large Language Model (LLM) – The AI's brain

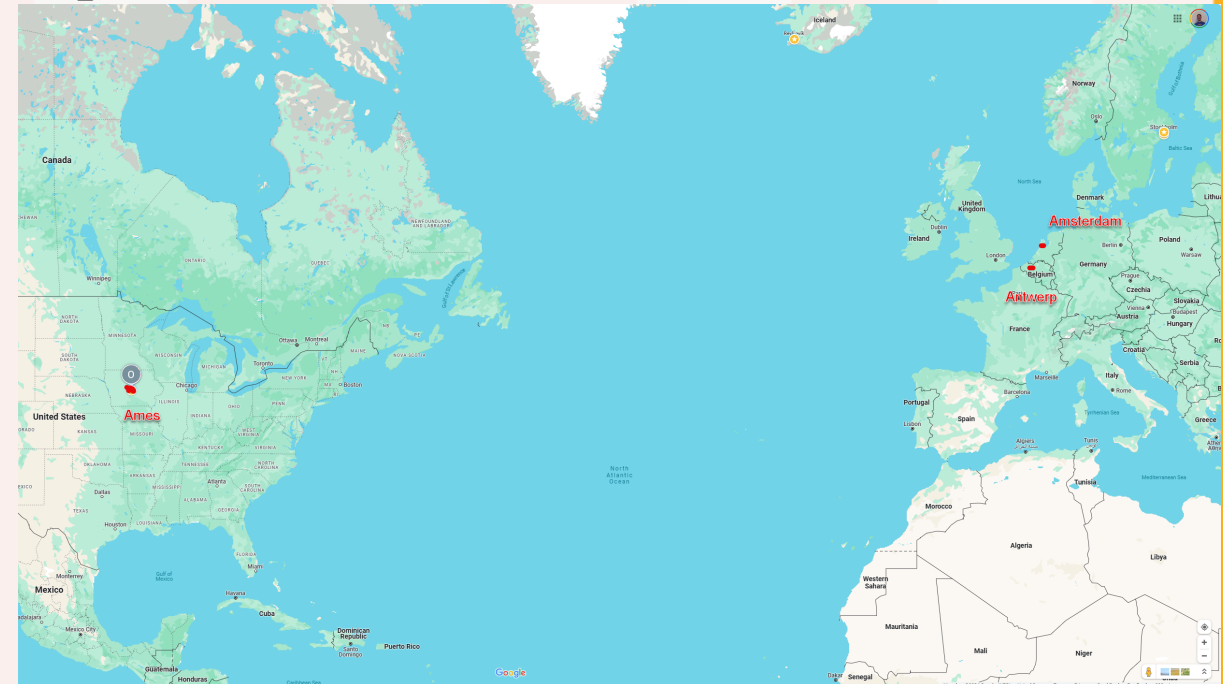
Why all the attention recently?

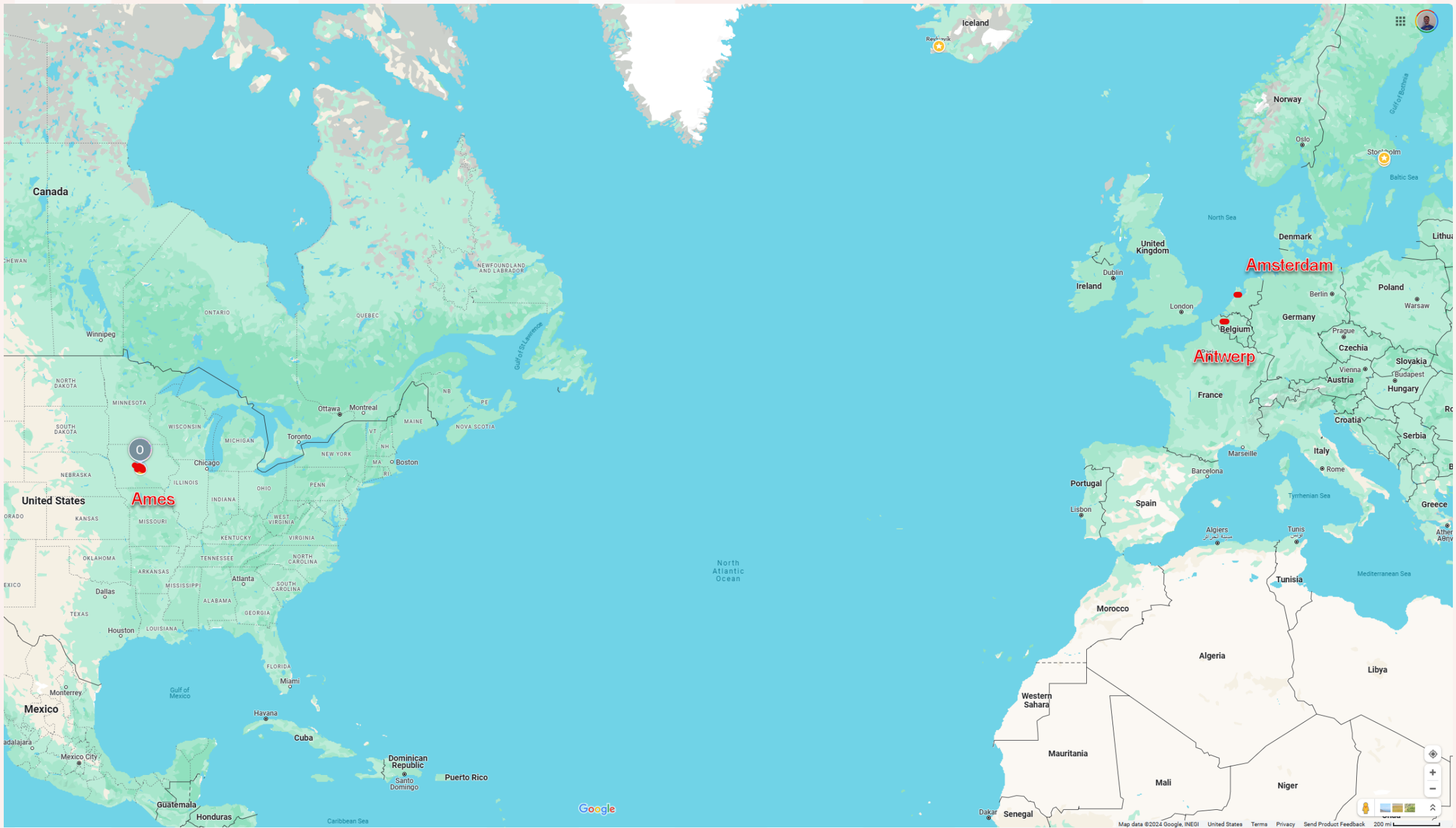
- ◆ Word vectors
- ◆ The introduction of Transformers
 - ◆ Attention is all you need
- ◆ Big data
- ◆ Big cloud processing
- ◆ Large Language Models
- ◆ Generative AI
- ◆ Multimodality



Word Vectors

- ◆ Representing words as numbers
- ◆ Ames [42°02'N 93°37'W]
- ◆ Amsterdam [52°22'N 04°53'E]
- ◆ Antwerp [51°13'N 04°24'E]
- ◆ 2 Dimensions

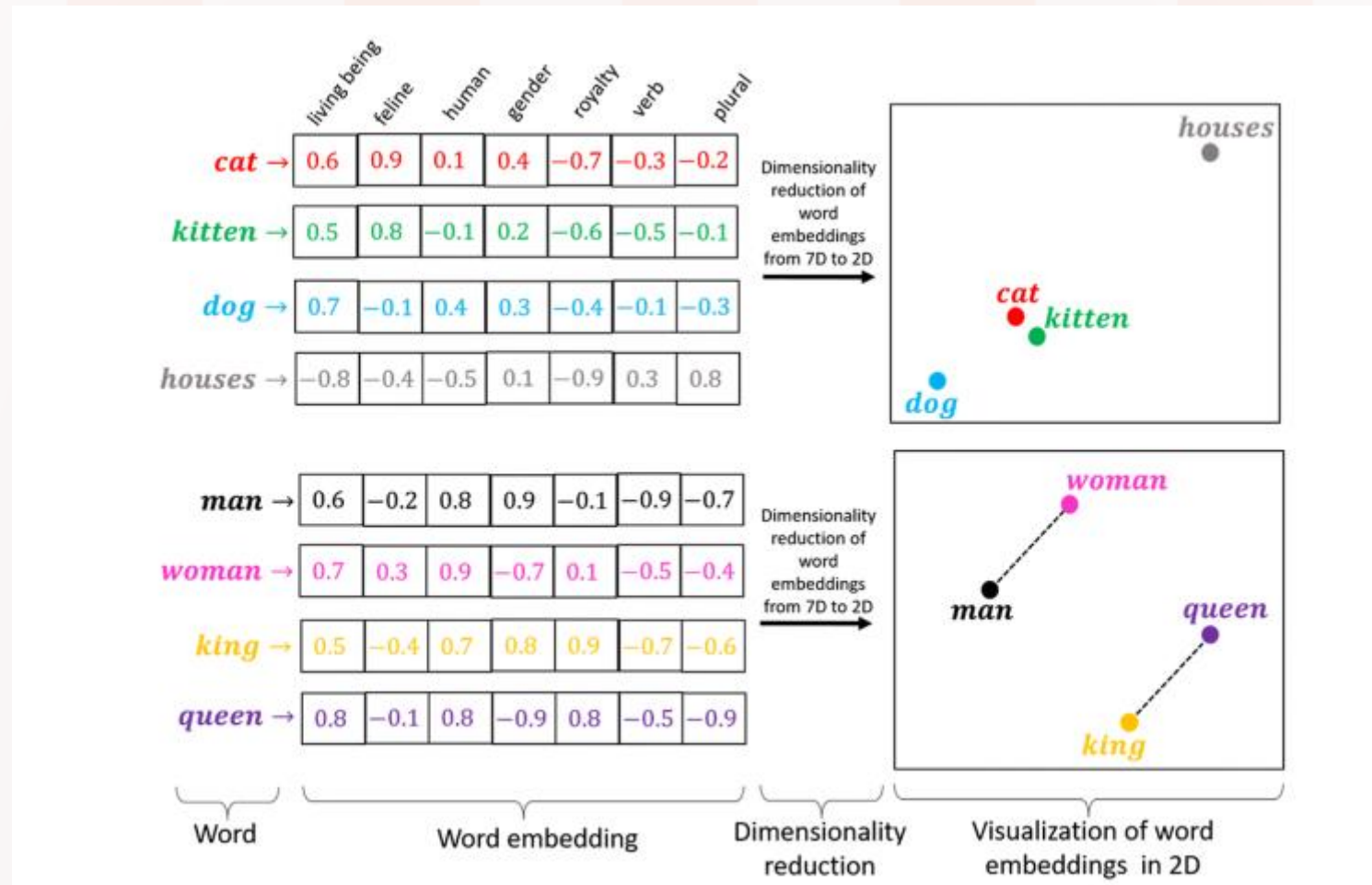




Google

Map data ©2024 Google, INEGI United States Terms Privacy Send Product Feedback 200 mi

Word Vectors



The old way - Gobots

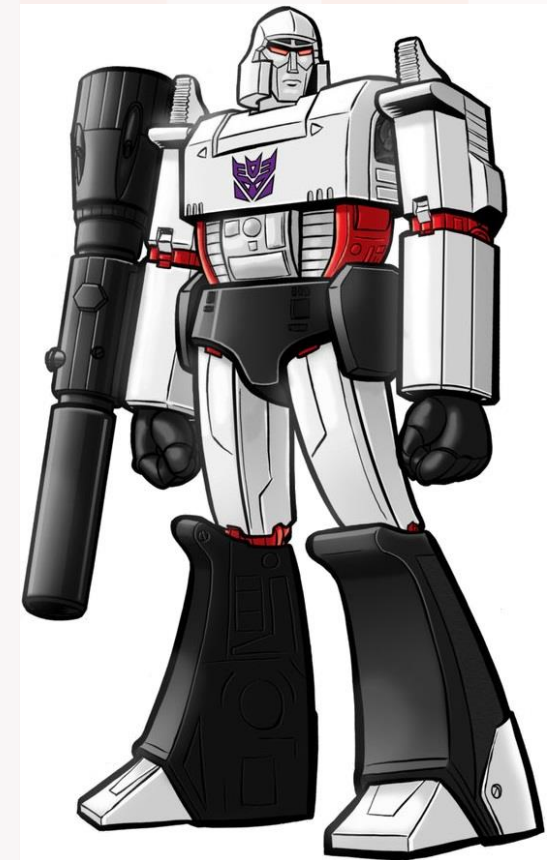
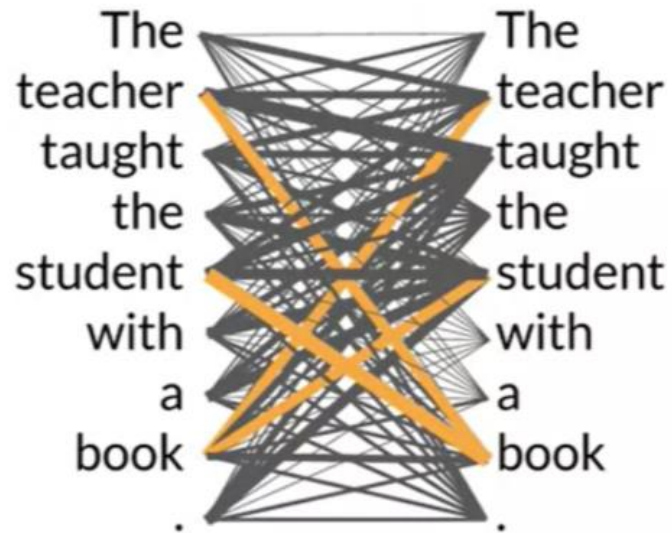


The teacher taught the student with the book.



The new, cool way - Transformers

- ◆ New, better way to encode and decode tokens and vectors



Generative AI

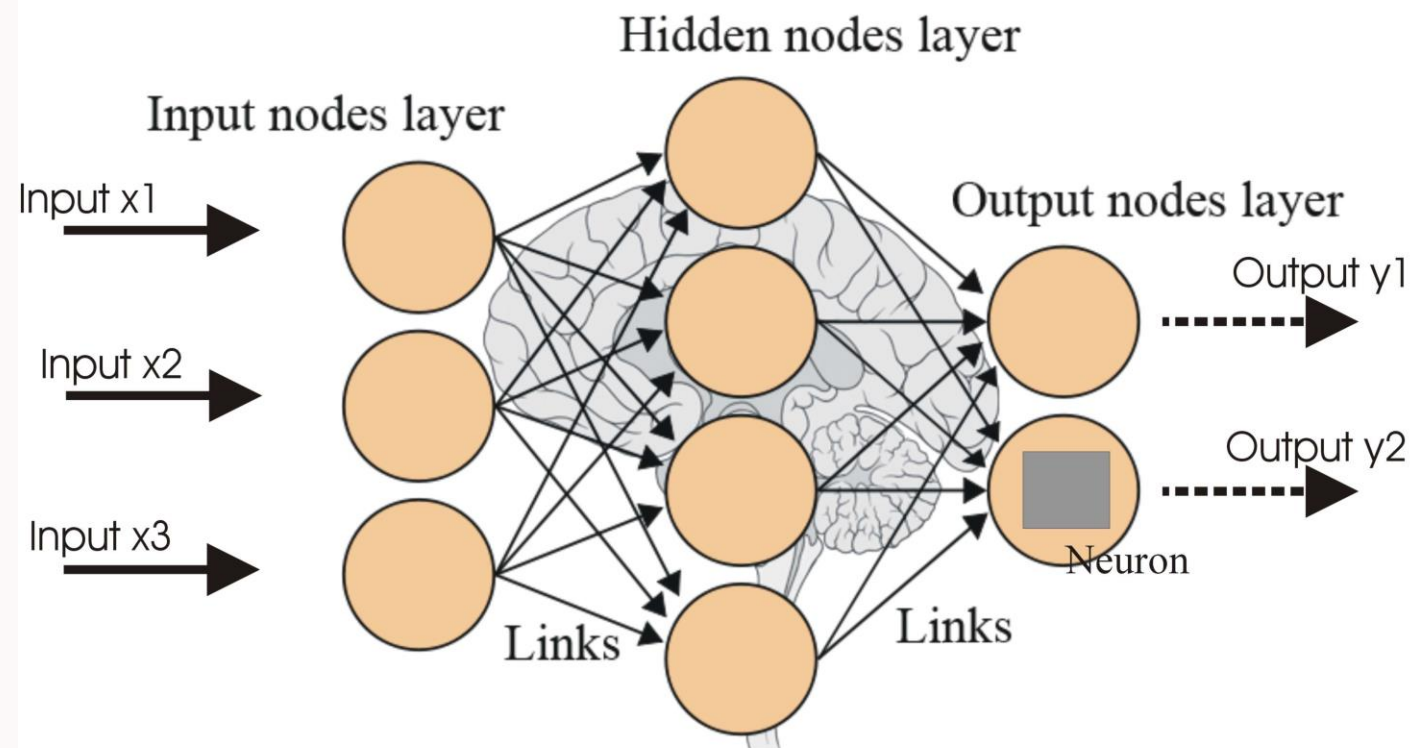
What the heck is a GPT, anyway?

Generative – AI that makes new stuff

Pre-Trained – The model was trained ahead of time

Transformer – A new way to input and output data

Neural Network



How?

- ◆ Don't think of it as a computer or software
- ◆ What role would you like it to play?
Review? Creator? Collaborator?
- ◆ Initiate (proact?) or react?
 - ◆ Tyranny of the blank page
 - ◆ "I want to..."
 - ◆ "What's the best way to..."
 - ◆ # Loop through \$ListItemList and..."
- ◆ Decide which AI tool to use

Prompting

Quick Prompt Tips

- Be specific, but not too specific
 - What happens if you ask for a bat?
 - How about football?
- Tell it what you want, not what you don't want
- Say how much you want
- Then ask for more



You and AI must develop a Love Language

- You have done this before
 - Learning to meet people in public
 - Learning to “Google”
 - Ordering food in a fancy restaurant
 - Parenting kids or pets
- You need to be the smartest person in the room with AI!



There is no perfect prompt

- Just like there was no perfect pickup line
- You will find go to prompts for different scenarios but those are just starts
- Always iterate
- Be polite and positive



There are no stupid questions

- Worst case it will say “No!”
- Ask it things that you “Know” it cannot do, see what happens.



Ask it about prompts



You

Please create me an image of a mostly white and black berne doodle who is sitting cutely in front of a Christmas tree. Make the image look like a real life photo.



ChatGPT



Here is the image of a mostly white and black Berne Doodle sitting cutely in front of a Christmas tree, created to resemble a real-life photograph.



You

Will you please share the prompt you sent to Dall-e with me?



ChatGPT

Certainly! Here's the prompt I used for DALL-E:

"A mostly white and black Berne Doodle dog sitting cutely in front of a decorated Christmas tree. The image should resemble a real-life photograph, capturing the fluffy texture of the dog's fur and the festive ambiance of the Christmas tree with its twinkling lights and ornaments."



Use AI to write better PowerShell

- ◆ Now that we're AI experts...
- ◆ How can we use this tool?
- ◆ Write better code (PowerShell!)
 - ◆ Faster
 - ◆ Fewer errors
 - ◆ More functionality
 - ◆ Better documentation
 - ◆ Write better *anything*

Some of my favorite Wow stories

- PTO Letters
- Checking math homework with a picture
- Cruise ship blood donor
- Soccer club A/B vs. two equal teams
- 20 Banks statements to 1 spreadsheet
- Customized learning

Examples

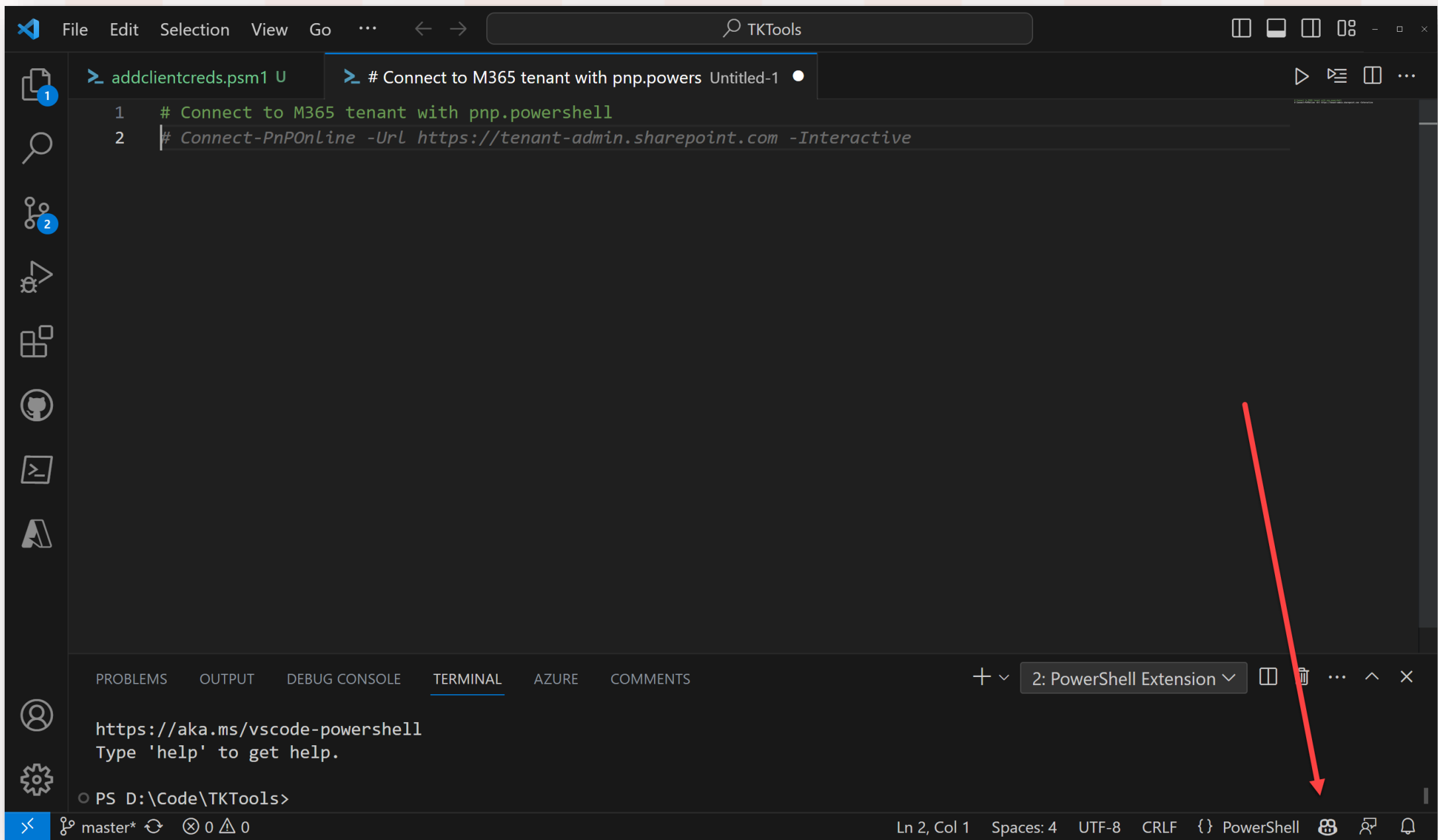
CoPilot

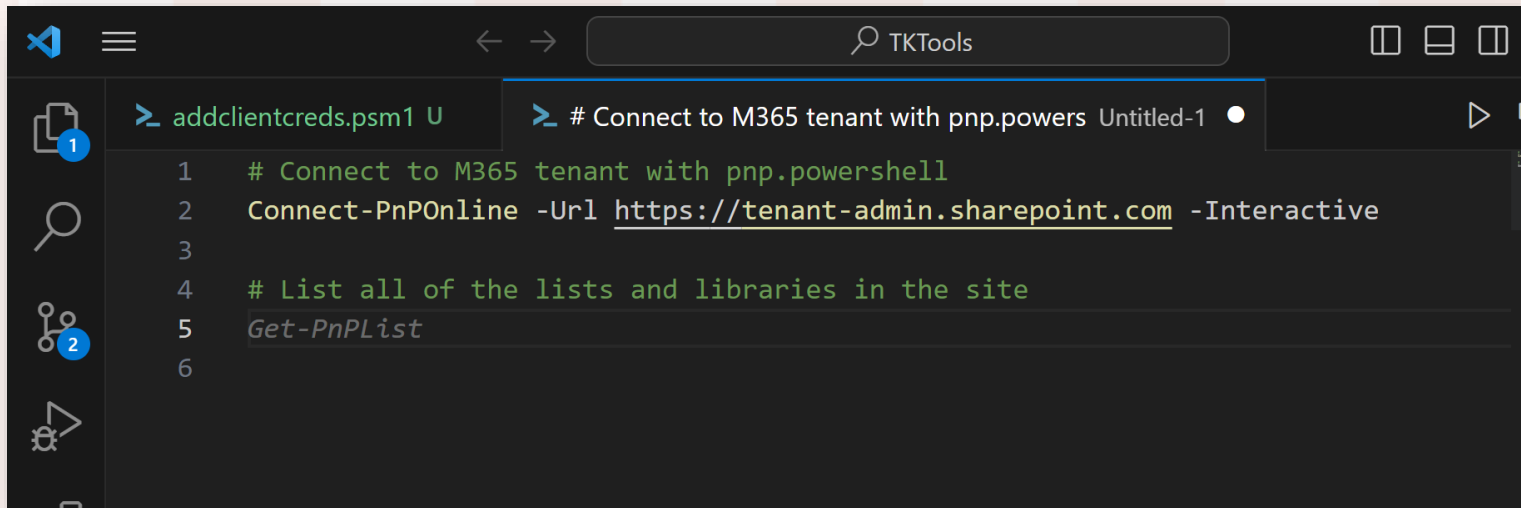
- ◆ GitHub Copilot
- ◆ Like pair programming
- ◆ Looks over your shoulder
- ◆ Uses its corpus, open tabs, and your code
- ◆ \$20 a month



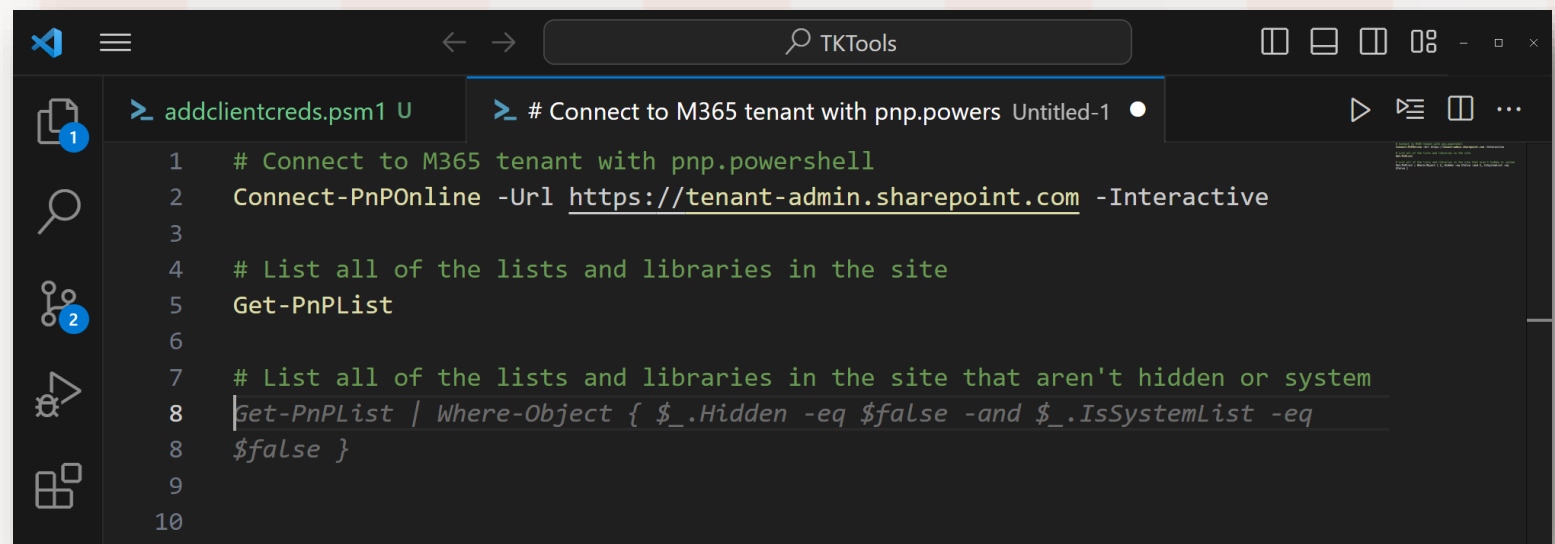
ChatGPT

- ◆ That genie in a bottle
- ◆ “Write me some PowerShell code that...”
- ◆ Compliments GitHub Copilot
- ◆ Spring for the \$20 a month

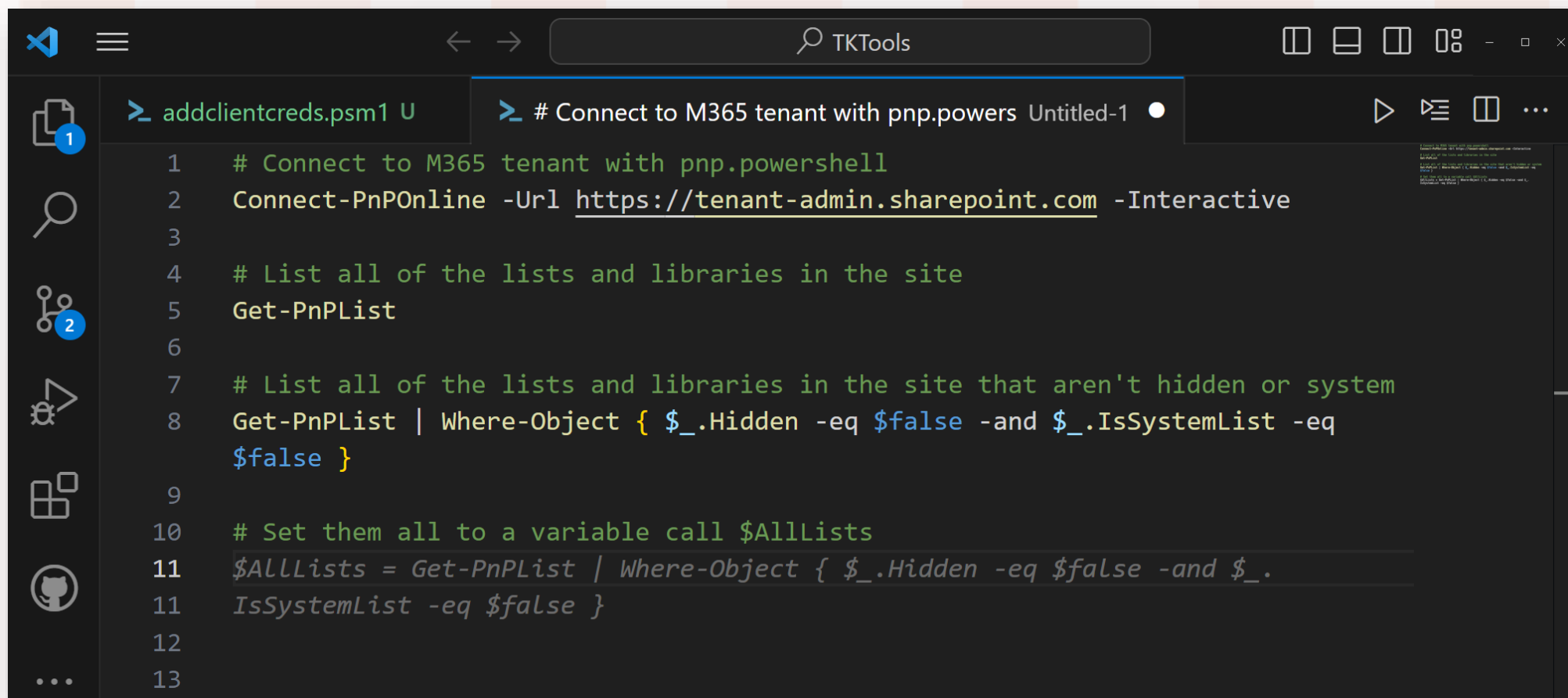




```
> addclientcreds.psm1 U # Connect to M365 tenant with pnp.powershell Untitled-1
1 # Connect to M365 tenant with pnp.powershell
2 Connect-PnPOnline -Url https://tenant-admin.sharepoint.com -Interactive
3
4 # List all of the lists and libraries in the site
5 Get-PnPList
6
```

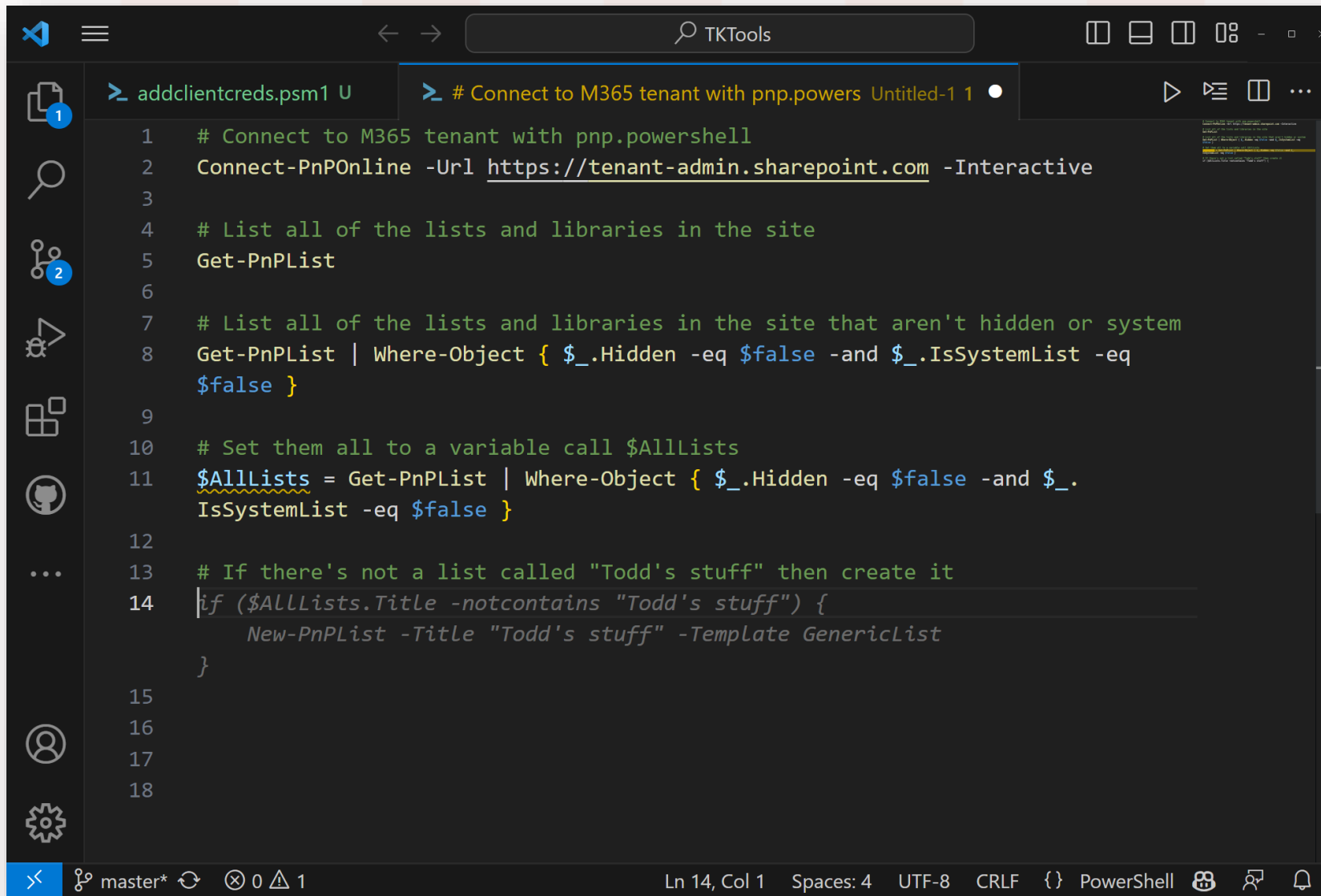


```
> addclientcreds.psm1 U # Connect to M365 tenant with pnp.powershell Untitled-1
1 # Connect to M365 tenant with pnp.powershell
2 Connect-PnPOnline -Url https://tenant-admin.sharepoint.com -Interactive
3
4 # List all of the lists and libraries in the site
5 Get-PnPList
6
7 # List all of the lists and libraries in the site that aren't hidden or system
8 Get-PnPList | Where-Object { $_.Hidden -eq $false -and $_.IsSystemList -eq
8 $false }
9
10
```



The image shows a Visual Studio Code editor window with a dark theme. The top bar includes the VS Code logo, a hamburger menu, navigation arrows, a search bar containing 'TKTools', and window management icons. The left sidebar contains icons for Explorer (with a '1' badge), Search, Source Control (with a '2' badge), Run and Debug, Extensions, and GitHub. The main editor area has two tabs: 'addclientcreds.psm1 U' and '# Connect to M365 tenant with pnp.powershell Untitled-1'. The active tab displays a PowerShell script with line numbers 1 through 13. The script connects to a SharePoint tenant and lists non-hidden, non-system lists. The script content is as follows:

```
1 # Connect to M365 tenant with pnp.powershell
2 Connect-PnPOnline -Url https://tenant-admin.sharepoint.com -Interactive
3
4 # List all of the lists and libraries in the site
5 Get-PnPList
6
7 # List all of the lists and libraries in the site that aren't hidden or system
8 Get-PnPList | Where-Object { $_.Hidden -eq $false -and $_.IsSystemList -eq
  $false }
9
10 # Set them all to a variable call $AllLists
11 $AllLists = Get-PnPList | Where-Object { $_.Hidden -eq $false -and $_.
11 IsSystemList -eq $false }
12
13
```



The image shows a Visual Studio Code editor window with a dark theme. The top bar includes the VS Code logo, a search bar with 'TKTools', and window management icons. The left sidebar contains icons for Explorer, Search, Source Control, Run and Debug, Extensions, GitHub, and Settings. The Explorer view shows two files: 'addclientcreds.psm1 U' and '# Connect to M365 tenant with pnp.powershell Untitled-1 1'. The main editor area displays a PowerShell script with 18 lines of code. The script connects to an M365 tenant, lists SharePoint lists, filters out hidden and system lists, and creates a new list if one with the title 'Todd's stuff' does not exist. The status bar at the bottom shows 'Ln 14, Col 1', 'Spaces: 4', 'UTF-8', 'CRLF', and 'PowerShell'.

```
1 # Connect to M365 tenant with pnp.powershell
2 Connect-PnPOnline -Url https://tenant-admin.sharepoint.com -Interactive
3
4 # List all of the lists and libraries in the site
5 Get-PnPList
6
7 # List all of the lists and libraries in the site that aren't hidden or system
8 Get-PnPList | Where-Object { $_.Hidden -eq $false -and $_.IsSystemList -eq
  $false }
9
10 # Set them all to a variable call $AllLists
11 $AllLists = Get-PnPList | Where-Object { $_.Hidden -eq $false -and $_.
  IsSystemList -eq $false }
12
13 # If there's not a list called "Todd's stuff" then create it
14 if ($AllLists.Title -notcontains "Todd's stuff") {
15     New-PnPList -Title "Todd's stuff" -Template GenericList
16 }
17
18
```

Resources

- ◆ [Shawn Wang on AI](#)
- ◆ [ChatGPT](#)
- ◆ [GitHub Copilot](#)
- ◆ [The 12 minute version of this with demos](#)
- ◆ [Why AI Will Save the World - Marc Andreessen](#)

Some AIs to check out

- Chatbots
 - ChatGPT
 - Google Gemini
 - Anthropic Claude
 - Bing Chat
 - M365 CoPilot
- Open Source LLMs
 - Llama 2
 - Mistral AI
 - Falcon
- PDF.ai
- Personal Productivity
 - Rewind AI
 - Mem.ai
 - Poised
- Images & Video
 - Midjourney
 - Wondercraft
 - Adobe Firefly
 - Headshot Pro
 - Pika
 - ElevenLabs
 - Synthesia

Questions?



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