

Assignment 1 presentations

January 11, 2022

Rules for presenting

- 3-4 minute presentations with 1 minute for question answering
- Please ask the speaker questions only at the end of their presentation.
- Jiafei will let you know that you have only 30 seconds left with a hand raise.
- Once done, we will do 2 waves of clap. First wave of clap for the end of presentation, second wave would be after the Q&A to welcome the next presenter.

My Own Interactions With AI

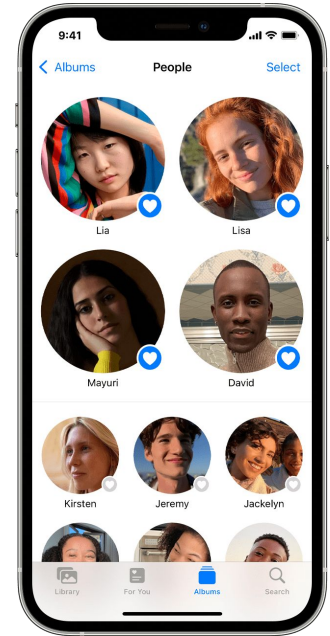
Ken Gu

Apple FaceID Unlocks my Phone

- It is estimated that we open our phone > 100 times a day
- **Reflection:** I am not a fan of this feature as it fails to open my phone under many circumstances

Apple Photos helps group photos

- When I look at my album Apple creates albums specific to a trip
- Apple photos groups together photos by people and even groups of people
- **Reflection:** cool feature that I use occasionally



Alexa as a super simple virtual assistant


- “Hey Alexa, what time is it?”
- “Hey Alexa, set an alarm for 8:00am?”
- “Hey Alexa, how’s the weather today?”
- “Hey Alexa, play ___?”
- **Reflection:** Not always reliable but still super helpful -> makes me lazier



ChatGPT helps me write emails

- I struggle with writing emails sometimes especially with the tone. ChatGPT helps a lot with this
- **Reflection:** a really exciting feature that I use frequently



I want to end my therapy sessions with my therapist. Please write a kind email for this. 



Dear [Therapist],

I wanted to reach out to you to let you know that I have decided to end my therapy sessions with you. I am grateful for the time we have spent together and for the insight and support you have provided me.

I feel that I have made significant progress in my therapy and am ready to move forward and continue working on my personal growth on my own.

Thank you again for everything.

Sincerely,
[Your Name]



What should the email subject line be?



A good subject line for this email could be "Ending Therapy Sessions" or "Transitioning Out of Therapy." You could also simply use the subject line "Thank You."

ChatGPT Disrupts the Education System

Mehmet Saygin Seyfioglu

What is ChatGPT

Step 1

Collect demonstration data and train a supervised policy.

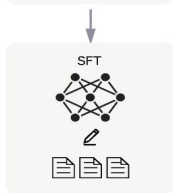
A prompt is sampled from our prompt dataset.



A labeler demonstrates the desired output behavior.



This data is used to fine-tune GPT-3.5 with supervised learning.



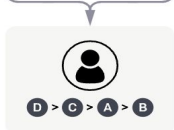
Step 2

Collect comparison data and train a reward model.

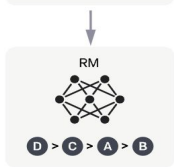
A prompt and several model outputs are sampled.



A labeler ranks the outputs from best to worst.



This data is used to train our reward model.



Step 3

Optimize a policy against the reward model using the PPO reinforcement learning algorithm.

A new prompt is sampled from the dataset.



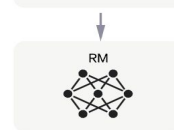
The PPO model is initialized from the supervised policy.



The policy generates an output.



The reward model calculates a reward for the output.



The reward is used to update the policy using PPO.



Taken from <https://openai.com/blog/chatgpt/>

My Experiments with ChatGPT

- I am TAing for Introduction to AI this quarter.
 - The course has an assignment and take-home exam based grading system.
 - Assignments include search, learning algorithms, game playing etc. ChatGPT seamlessly doing most of the homework assignments and take home exams.

A Sample Experiment

ME

Solve the Missionary-Cannibal Problem (with 3 missionaries and 3 cannibals) with a RECURSIVE DEPTH-FIRST SEARCH as follows:



Requirements:

You MUST use a recursive depth-first search. No frontier. Just simple recursion, up and down the search tree. It is usually called a backtracking search.

No repeated states. When you reach a state for which there is an identical ancestor on the same path, the search backs up. For this, you will need to keep a STACK of the path above the current state.

Count how many states are searched to find each solution; there are four. For your counting keep track of 3 kinds of states you generate:

illegal states in which the cannibals eat the missionaries,

repeated states that are the same as an ancestor state on the same path,

total states searched (ie. all states except the illegal and repeated ones).

You MUST use Python 3 for this assignment. It is a Python warmup.

Please comment each method, describing its purpose, arguments and return value.

Please comment important sections of code; 'This is the main search', 'This checks for repeated states', etc.

Your program should print out all paths it finds to the goal state and the three counts for the search as a whole.

Note:

Don't count invalid states, e.g., (-1, 2, R), (2, -2, L), etc., as the illegal states, since these states don't exist.

ChatGPT's Answer

Sure! Here is a solution using a recursive depth-first search in Python 3:

Copy code

```
from collections import deque

def dfs(current_state, path, visited_states, illegal_states,
        repeated_states):
    # Check if the current state is the goal state
    if current_state == (0, 0, 'L'):
        print('Solution found:', path)
        return

    # Check if the current state is illegal or has already been visited
    if current_state in illegal_states or current_state in visited_states:
        return

    # Mark the current state as visited
    visited_states.add(current_state)

    # Generate the possible next states
    next_states = generate_next_states(current_state)

    # Add the current state to the path
    path.append(current_state)

    # Recursively search for the goal state in the next states
    for state in next_states:
        dfs(state, path, visited_states, illegal_states, repeated_states)

    # Remove the current state from the path
    path.pop()

def generate_next_states(current_state):
    next_states = []

    missionaries, cannibals, boat = current_state

    # Try moving one missionary
    if missionaries > 0:
        next_states.append((missionaries - 1, cannibals, 'R' if boat == 'L'
            else 'L'))
    # Try moving two missionaries
    if missionaries > 1:
        next_states.append((missionaries - 2, cannibals, 'R' if boat == 'L'
            else 'L'))
    # Try moving one cannibal
    if cannibals > 0:
        next_states.append((missionaries, cannibals - 1, 'R' if boat == 'L'
            else 'L'))
    # Try moving two cannibals
    if cannibals > 1:
        next_states.append((missionaries, cannibals - 2, 'R' if boat == 'L'
            else 'L'))
    # Try moving one missionary and one cannibal
```

It can generate an infinite amount of different solutions

Preparing CSE-599 Assignment 1 with ChatGPT

ME I am a computer science phd student heavily using AI tools like chatgpt, copilot, and grammarly. You can mention that as a non native speaker I take some help from grammarly or rephrasing my words using chatgpt etc. you can be creative. I want you to do the following task as if you are me (without giving an introduction about myself, just get straight to the point).

"In this assignment, your goal is to reflect on your personal usage of AI applications / tools to share with the class. You should spend a week attempting to interact with an AI model in some way, such as switching to a new technology and reporting back on the experience."

As a computer science PhD student, I frequently use AI tools like ChatGPT, CoPilot, and Grammarly to assist with my work. As a non-native speaker, I find that these tools are particularly helpful for rephrasing my words and ensuring that my writing is clear and concise.

For this assignment, I decided to spend a week interacting with a new AI technology. I chose to try out a natural language processing (NLP) tool called GPT-3, which is one of the most advanced language models currently available.

Using GPT-3 was a very interesting experience. One of the most impressive things about this tool is its ability to generate human-like text that is coherent and well-structured. I used it to write a few short essays and was amazed at how well it was able to capture the tone and style of my writing.

Overall, my experience with GPT-3 was very positive and I would definitely recommend it to others. The tool is very user-friendly and the results it produces are of high quality. I can see it being very useful for tasks like content generation, language translation, and even automated customer service.

ME longer, this won't take 4 minutes. this will only take 2 minutes at most

As a computer science PhD student, I have come to rely heavily on AI tools like ChatGPT, CoPilot, and Grammarly in my daily work. These tools have been especially helpful for me as a non-native speaker, allowing me to express myself clearly and accurately in written communication.

For this assignment, I decided to spend a week interacting with a new AI technology in order to gain a better understanding of its capabilities and limitations. I chose ChatGPT, a natural language processing tool that is specifically designed for chat applications.

Using ChatGPT was a very interesting and enlightening experience. One of the most impressive things about this tool is its ability to understand and respond to a wide range of inputs, even when they are phrased in a way that is not perfectly clear. This was especially useful for me when I was trying to communicate with it in my second language, as it was able to understand my intentions even when my wording was not perfect.

In addition to its ability to understand and respond to a variety of inputs, I was also impressed by ChatGPT's ability to generate responses that were both relevant and engaging. I found myself having long conversations with it, and it was able to keep up with my train of thought and provide meaningful responses that kept me engaged and interested.

Overall, my experience with ChatGPT was very positive and I would definitely recommend it to others. It is a powerful and useful tool that has the potential to greatly improve communication and productivity. I can see it being particularly useful for tasks like content generation, language translation, and even automated customer service.

Discussion

- Not only ChatGPT solves assignments correctly, but it also provides a good explanation for the whole code at the end.
- Also provides a different output for every request using a different seed.

This revolutionizes the way we teach, because grading assignments just for the right answers is somewhat obsolete. In a way, it forces the education system to be more intellectually stimulating.

Interactions with AI

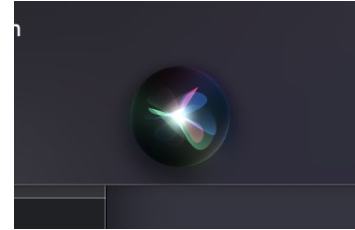
(in retrospect)
Sidharth Talia

What kind of AI are we talking about?

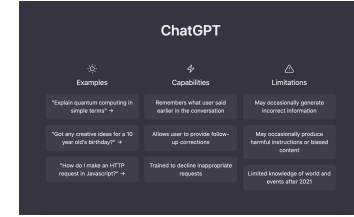
- According to this [post](#) by IBM, there are two camps for AI:
 - AI that (pretends) to think/act like humans
 - AI that attempts to think/act rationally
- These two can overlap, because suggesting otherwise would be equivalent to suggesting that humans are “always” irrational (we are sometimes irrational).
- Like for instance when I decided to make this slide with no images and lots of words. Not a very rational thing to do for slides.

My interaction with AI that pretends to think/act like humans

- ChatGPT
- Siri (I've used it once, I did not find it particularly appealing)
- Github Copilot
 - (God help the robots I'm pretending to write the code for)
- AI with Theory of Mind (we ran an experiment last quarter) based on [Jiafei's work](#) where the system would predict the human's intent.



Siri



chatGPT

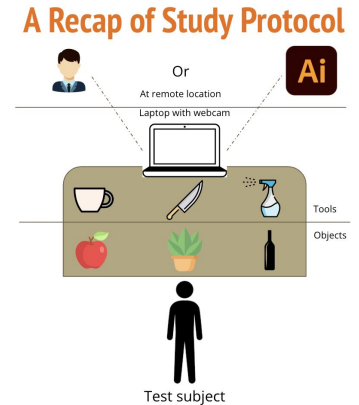


Image taken from work done by Jiafei et. al

My interactions with AI that attempts to think/act rationally:

- Social/Youtube media recommendation systems
- The operating systems on or connected to our devices (Less intelligent AI):
 - Computer OS(Load balancing, task scheduling--these things are not magic)
 - Communication systems (hamming codes are “error correcting” codes)
 - Stuff that runs our infrastructure(Lifts, Lights, Doors, Locks)



[youtube](https://www.youtube.com)



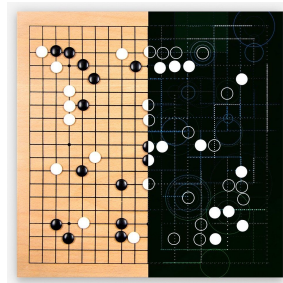
[Ubuntu logo](https://www.ubuntu.com)

My life engaging with AI

(in retrospect)
Zucks Liu

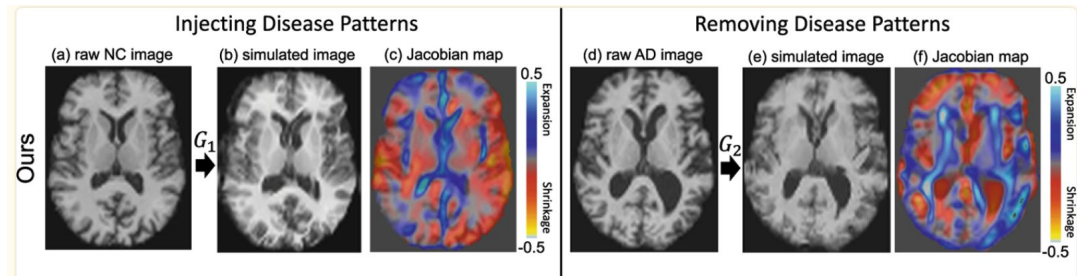
Engaging with AI in my life - start

- I played go for 5 years while I was young.
- Being told go is the hardest chess game and will **never be beaten** by machine intelligence.
- Such faith **gradually fell down in 1 hour** when witnessing all five games between Sedol Lee and AlphaGo in 2015.
- Also the time ResNet was proposed. I didn't understand ResNet at all when I heard it as a freshman, but actually felt lucky because I chose electrical engineering as my major, which is very 'related to' artificial intelligence.



Engaging with AI in my life - keep going

- My first AI project (if not count MNIST classification) was to use GAN for music generation (accompaniment generated by GAN!).
- Started my research on Alzheimer's Disease diagnosis using deep learning.
- After that I believed AI will change the world not only by **beating human beings, but also by helping to save millions of lives.**
- I also interned at Tencent Inc and conducted researches on optimizing workflow of ultrasonic and pathology department using reinforcement learning. (**It is now being used in some hospitals in China!**)



Engaging with AI in my life - now

I am now interested in computer vision, natural language processing, biomedical imaging and computational biology.

And how could I combine all of my knowledge together to help our lives?

Engaging with AI in my life - now

ChatGPT answer:

Computer vision, natural language processing, biomedical imaging, and computational biology are all broad fields that involve a wide range of techniques and technologies. One way to combine your knowledge in these fields would be to work on projects that intersect them. For example, you could work on developing a system that uses computer vision and natural language processing to assist in diagnosing diseases using biomedical images.

It will be great to have a specific application or problem in mind, as that will help you identify the specific skills and technologies you need to develop in order to achieve your goal. (Good advice!)

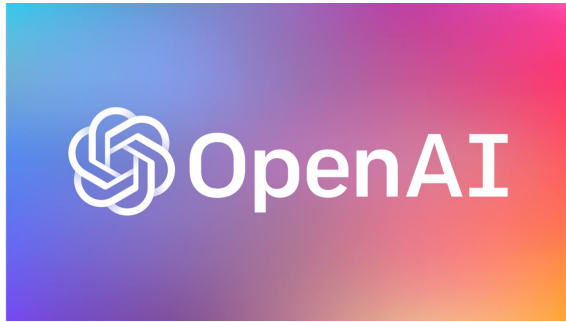
And more importantly you can contribute to society by developing solutions that can aid medical diagnosis, drug development, or personalized medicine.

Therefore my course objective is: **Can I find a new version of answer which is better than ChatGPT?**

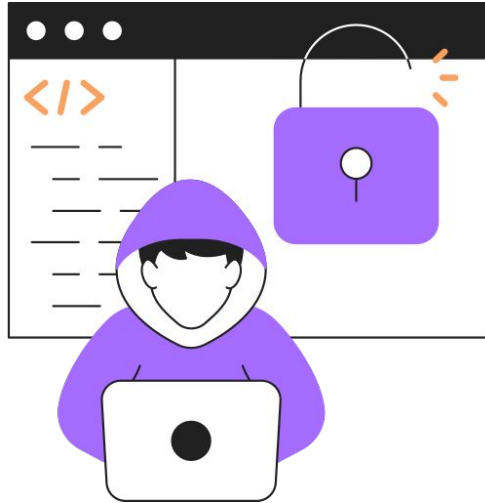
A Reflection on Interacting with GitHub Copilot

Helen Wang

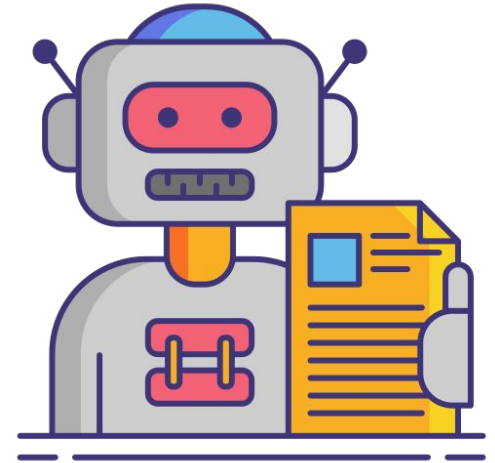
Background



Powered by OpenAI
Codex



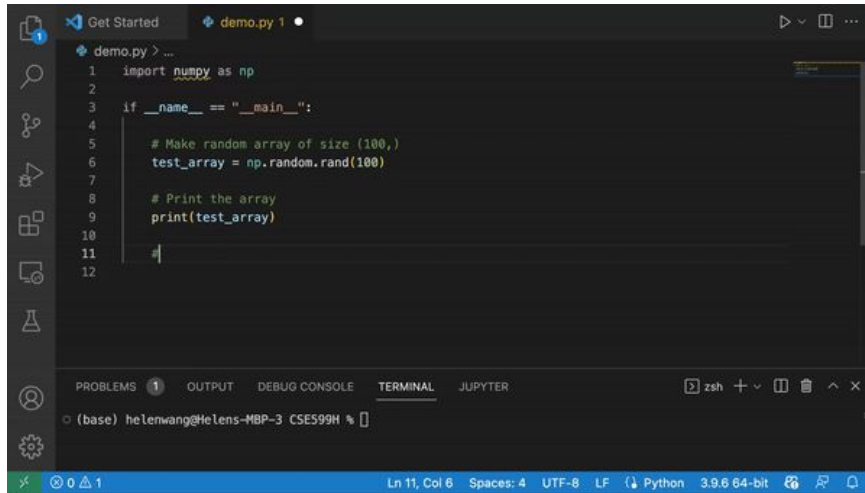
Trained on public
repositories, spans a
variety of programming
languages



Autocomplete style
suggestions

Where Copilot has been helpful:

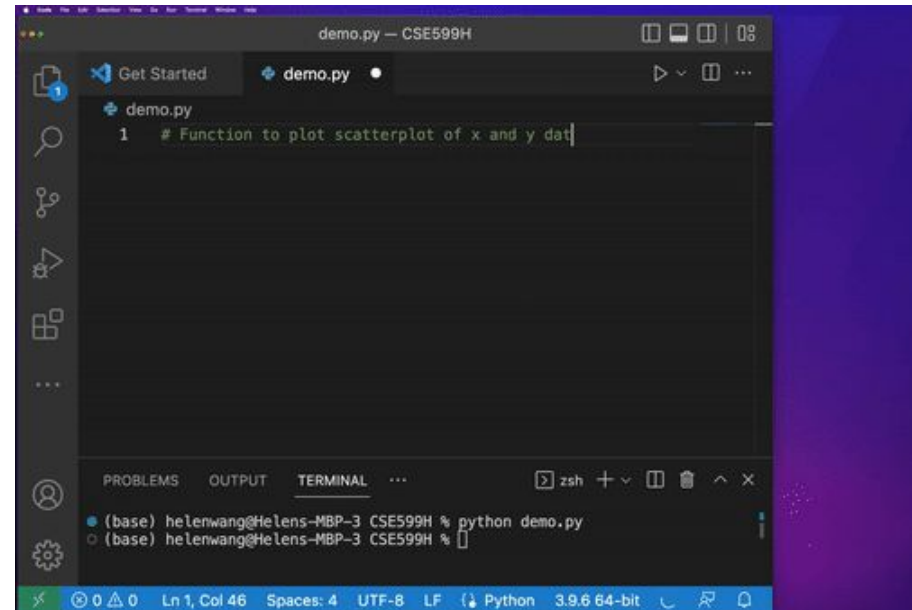
- Functions for plotting
- Array operations
- Writing data loaders



A screenshot of the Visual Studio Code editor showing a Python file named 'demo.py'. The code includes an import for 'numpy' as 'np' and a main function that generates a random array of size (100,) and prints it. The status bar at the bottom indicates the current position is Ln 11, Col 6.

```
demo.py > ...
1 import numpy as np
2
3 if __name__ == "__main__":
4
5     # Make random array of size (100,)
6     test_array = np.random.rand(100)
7
8     # Print the array
9     print(test_array)
10
11
12
```

Autocomplete array operations.

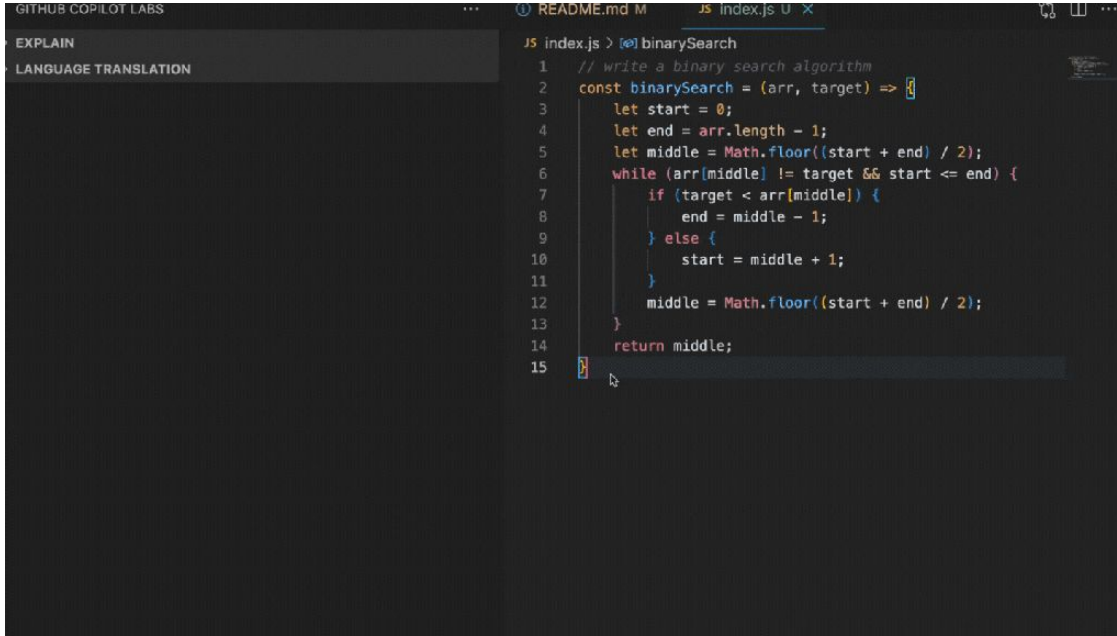


A screenshot of the Visual Studio Code editor showing a Python file named 'demo.py'. The code includes a comment for a function to plot a scatterplot of x and y data. The status bar at the bottom indicates the current position is Ln 1, Col 46.

```
demo.py — CSE599H
demo.py
1 # Function to plot scatterplot of x and y data
```

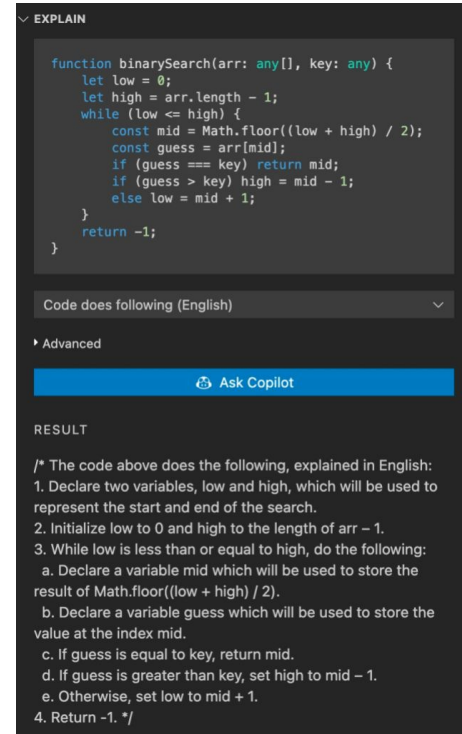
Autocomplete of a plotting function.

Other Interesting Features



```
1 // write a binary search algorithm
2 const binarySearch = (arr, target) => {
3   let start = 0;
4   let end = arr.length - 1;
5   let middle = Math.floor((start + end) / 2);
6   while (arr[middle] !== target && start <= end) {
7     if (target < arr[middle]) {
8       end = middle - 1;
9     } else {
10      start = middle + 1;
11    }
12    middle = Math.floor((start + end) / 2);
13  }
14  return middle;
15 }
```

Language
Translation



```
function binarySearch(arr: any[], key: any) {
  let low = 0;
  let high = arr.length - 1;
  while (low <= high) {
    const mid = Math.floor((low + high) / 2);
    const guess = arr[mid];
    if (guess === key) return mid;
    if (guess > key) high = mid - 1;
    else low = mid + 1;
  }
  return -1;
}
```

Code does following (English)

Advanced

Ask Copilot

RESULT

/* The code above does the following, explained in English:

1. Declare two variables, low and high, which will be used to represent the start and end of the search.
2. Initialize low to 0 and high to the length of arr - 1.
3. While low is less than or equal to high, do the following:
 - a. Declare a variable mid which will be used to store the result of Math.floor((low + high) / 2).
 - b. Declare a variable guess which will be used to store the value at the index mid.
 - c. If guess is equal to key, return mid.
 - d. If guess is greater than key, set high to mid - 1.
 - e. Otherwise, set low to mid + 1.
4. Return -1. */

Code
Explanation

Scenarios where Copilot fails:



Descriptions which contain unfamiliar terminology



Multi-stage and higher-level prompts



When need to use very specific functions or class attributes

Testaments from Users of GitHub Copilot



“I feel more **productive** and **fulfilled** when I use GitHub Copilot”



“I enjoy programming much more now because I’m able to focus on the **interesting** parts”



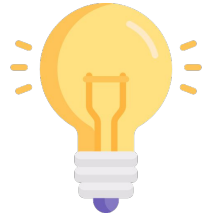
“Most of the autocomplete code is **correct** and sometimes more **efficient** than how I would normally write it”

Reflection & Moving Forward

Less reliance on Stack Overflow: **speed up** programming by removing the need to recall syntax of simple common libraries



Focus on thinking about **innovative ideas** rather than syntactical details when developing algorithms



While Copilot may produce code which compiles and appear correct, must **be careful** to check whether the function achieves the desired result



My AI Use in a Day as an AI Developer

Cheng-Yu Hsieh

Daily Routine Use of AI

- Google Assistant to play music via voice control
 - Feature: Hey Google, play ___ by ___
 - Reflection:
 - Sequential processing inherent to voice control is less efficient
 - Often fail for non-English search
- Spotify recommendation
 - Feature: Weekly discover curates new music playlists
 - Reflection:
 - Overly exploit current taste v.s. new exploration
 - Adjust recommendation with implicit feedback?
- Google Map for navigation
 - Feature: Get you safely and quickly from one place to another
 - Reflection:
 - My own judgement always loses
 - Hard to live without it!
- Amazon Search
 - Feature: Rank the most relevant items from search
 - Reflection:
 - Useful and makes it more convenient than shopping in store

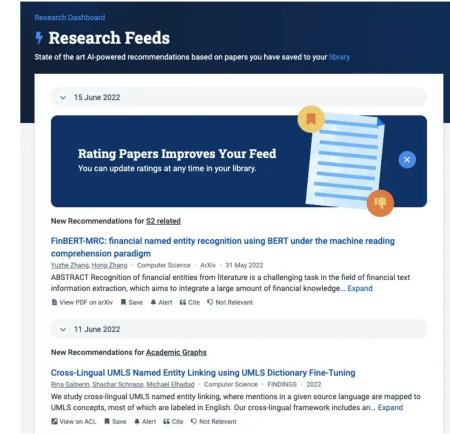


Hey Google



Using AI in My Work in AI

- Semantic Scholar
 - Feature: Research feeds recommendation
 - Reflection:
 - Great to keep track of the progress in relevant fields
 - Sometimes overwhelming
- Auto-Complete Everywhere
 - Feature: Gmail, Google Docs/Slides, VSCode completion
 - Reflection:
 - Very handy, and getting better and better
 - Auto-correction can be annoying sometimes
- My own AI Model
 - Feature: Why is it not working...
 - Reflection:
 - Better tools to debug AI model development
 - Be mindful of the users



Daily Routine Use of AI

- Google Assistant to play music via voice control
 - Feature: Hey Google, play ___ by ___
 - Reflection:
 - Sequential processing inherent to voice control is less efficient
 - Often fail for non-English search
- Spotify recommendation
 - Feature: Weekly discover curates new music playlists
 - Reflection:
 - Overly exploit current taste vs. new exploration
- Google Map for navigation
 - Feature: Gets you safely and quickly from one place to another
 - Reflection:
 - Hard to live without it!
- Amazon Search
 - Feature:
 - Reflection:

Ranjay Krishna | ranjay@cs.washington.edu

My Daily Interactions With AI

Chia-Hsuan Lee

Most used Apps empowered by AI

- **Recommendation system:**

On Instagram, Youtube, Spotify:

Good for exploring new stuff. Their recommendations are getting better and better!

On Twitter: Only follow academic accounts to reduce information anxiety ...



- Google Search: almost uses it as a smart assistant

- Google Map



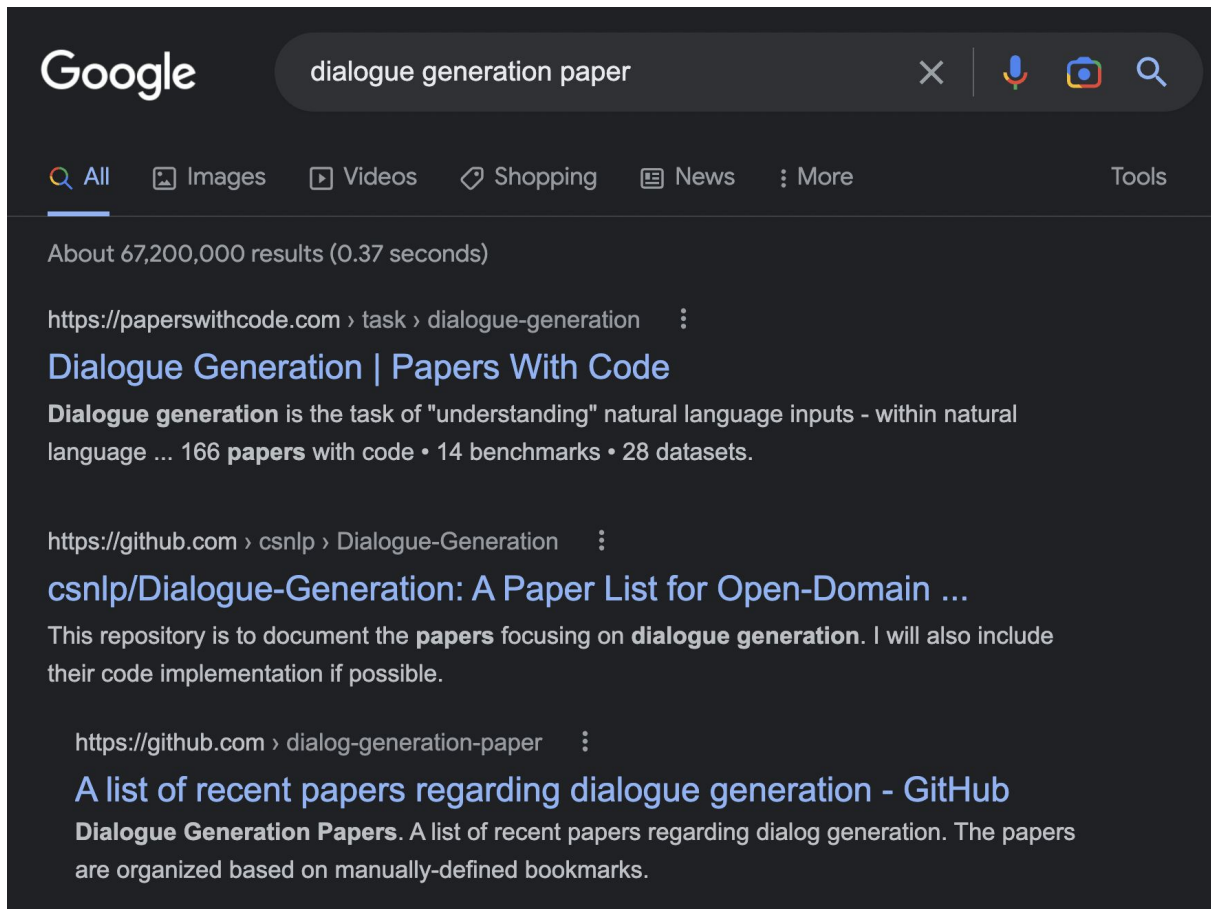
- Speech recognition on iphone

- Codex / GPT3 For research.

Google Search

Search for a topic

then search sequentially



The screenshot shows a Google search interface with the query "dialogue generation paper". The search results are displayed in a dark theme. The first result is from "paperswithcode.com" titled "Dialogue Generation | Papers With Code", with a description: "Dialogue generation is the task of 'understanding' natural language inputs - within natural language ... 166 papers with code • 14 benchmarks • 28 datasets." The second result is from "github.com" titled "csnlp/Dialogue-Generation: A Paper List for Open-Domain ...", with a description: "This repository is to document the papers focusing on dialogue generation. I will also include their code implementation if possible." The third result is also from "github.com" titled "A list of recent papers regarding dialogue generation - GitHub", with a description: "Dialogue Generation Papers. A list of recent papers regarding dialog generation. The papers are organized based on manually-defined bookmarks."

Google

dialogue generation paper

All Images Videos Shopping News More Tools

About 67,200,000 results (0.37 seconds)

<https://paperswithcode.com> › task › dialogue-generation

Dialogue Generation | Papers With Code

Dialogue generation is the task of "understanding" natural language inputs - within natural language ... 166 papers with code • 14 benchmarks • 28 datasets.

<https://github.com> › csnlp › Dialogue-Generation

csnlp/Dialogue-Generation: A Paper List for Open-Domain ...

This repository is to document the papers focusing on dialogue generation. I will also include their code implementation if possible.

<https://github.com> › dialog-generation-paper

A list of recent papers regarding dialogue generation - GitHub

Dialogue Generation Papers. A list of recent papers regarding dialog generation. The papers are organized based on manually-defined bookmarks.

Google Search

(Top) Use as a QA system

(Bottom) useful suggested
search queries

The image shows two screenshots of Google search results. The top screenshot is for the query "when is chatgpt invented". It shows the Google logo, the search bar with the query, and navigation links for All, Images, News, Shopping, Videos, and More. The results show "About 166,000,000 results (0.39 seconds)" and a "Did you mean" suggestion for "when is chatbot invented". The main result is a snippet from Wikipedia stating that ChatGPT was launched by OpenAI in November 2022. The bottom screenshot is for the query "ai photo editing". It shows the Google logo, the search bar with the query, and navigation links for microphone, image search, and search. The results section is titled "People also ask" and lists four related questions: "What is AI in photo editing?", "What is the best AI photo editor?", "How do I edit an AI image?", and "What is the best free AI photo enhancer?".

Google when is chatgpt invented

All Images News Shopping Videos More Tools

About 166,000,000 results (0.39 seconds)

Did you mean: when is **chatbot** invented

ChatGPT (Generative Pre-trained Transformer) is a chatbot launched by OpenAI in **November 2022**. It is built on top of OpenAI's GPT-3 family of large language models, and is fine-tuned (an approach to transfer learning) with both supervised and reinforcement learning techniques.

[https://en.wikipedia.org › wiki › ChatGPT](https://en.wikipedia.org/wiki/ChatGPT)

[ChatGPT - Wikipedia](#)

Google ai photo editing

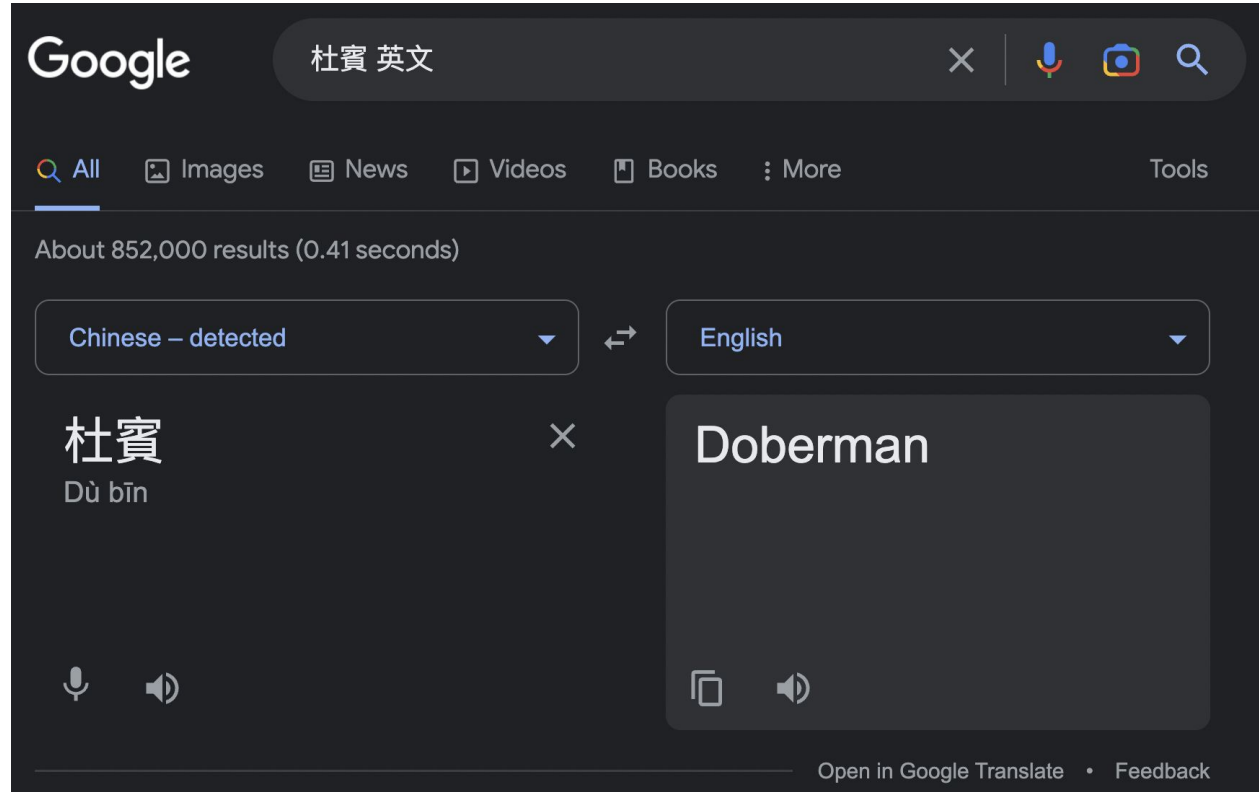
People also ask :

- What is AI in photo editing?
- What is the best AI photo editor?
- How do I edit an AI image?
- What is the best free AI photo enhancer?

Feedback

Google Search

Quick google translate



The screenshot shows the Google search interface. At the top, the search bar contains the text '杜賓 英文'. Below the search bar, navigation links for 'All', 'Images', 'News', 'Videos', 'Books', and 'More' are visible, along with a 'Tools' link on the right. The search results indicate 'About 852,000 results (0.41 seconds)'. A translation widget is displayed, showing 'Chinese – detected' on the left and 'English' on the right. The Chinese text '杜賓' is shown with its pinyin 'Dù bīn' below it. The English translation 'Doberman' is shown in a dark box on the right. At the bottom of the widget, there are icons for voice search and a speaker icon. At the very bottom of the page, there are links for 'Open in Google Translate' and 'Feedback'.

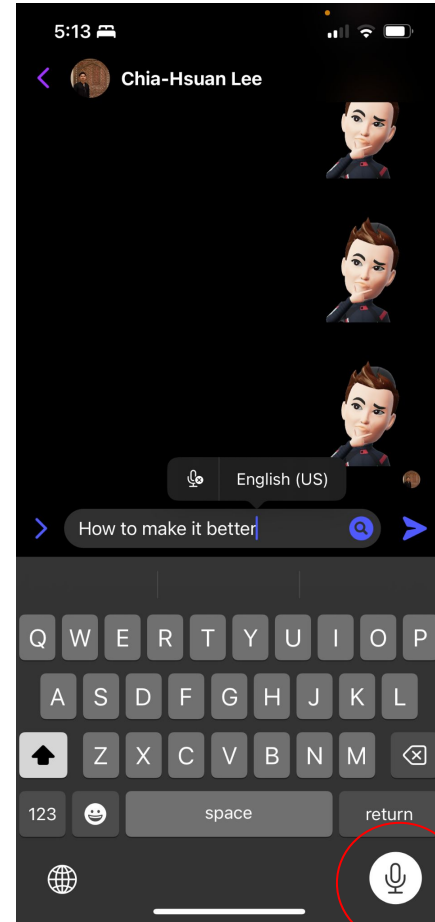
Speech recognition

Can't live without it!

Really saves tons of my time.

Especially when I am walking or driving.

code-switching is still not good!



Rewind on 2022

- Spend too much time on youtube / instagram / twitter (based on the screen time reports in iphone and macbook)
- Will probably spend more and more time on LLM in 2023 ...
- (Best of 2022) **Autocompletion**
One feature that I find useful and use frequently.
Autocompletion on gmail, gdoc, and coding.

YouTube Recommendation Holes

Madeleine Grunde-McLaughlin



How quickly does it latch onto your interests?

1. Pick a few political figures
2. “Was X right?” in the search bar of an incognito tab
 - a. Trump, Obama, Putin, Marjorie Taylor Greene
3. 5 minutes of the top recommended video for 10 videos
4. Look at the first few recommended Youtube shorts
5. Track ads and keywords



Home

All

Live

Bossa Nova

News

Gaming

Laughter

History

Comedy

Dogs

Animated films

Children's Music

Conversation

Recently uploaded



Shorts



Subscriptions



Library



History

Sign in to like videos, comment, and subscribe.



Sign in

Explore



Trending



Music



Movies & TV



Live



Gaming



News



Sports



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Podcasts



Browse channels



Jeffries thanks Pelosi before handing gavel to McCarthy

MSNBC
844K views • 11 hours ago



January Jazz: Sweet Jazz & Elegant Bossa Nova to relax, study and work...

Cozy Jazz Music
1.8K watching
LIVE



What's Hidden Down ZZYZX Road???

Oddity Odysseys
1.4K views • 9 hours ago



Healing Music to Relieve Stress, Fatigue, Depression, Negativity, Detox...

Lucid Dream
851 watching
LIVE



Pranks Destroy Scam Callers- GlitterBomb Payback

Mark Rober
58M views • 7 months ago



2022 FIFA World Cup: TOP 15 GOALS of the Tournament | FOX Soccer

FOX Soccer
2M views • 2 weeks ago



Survive 100 Days In Circle, Win \$500,000

MrBeast
110M views • 3 months ago



4K Relaxing Fireplace with Burning Logs and Crackling Fire Sounds for...

Relaxing Fire Sound
356K views • Streamed 1 month ago



 Was Trump right?






Pro/neutral
to Trump

DRAMA



The 7
DUMBEST
Trump
Statements






'I Was Right About Everything': Former President Donald Trump Speaks to CBN | FULL INTERVIEW

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




Trump opens up about his Middle East strategy

 Fox News  10.2M subscribers [Subscribe](#)


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
Watch the full, on-camera shouting match between Trump, Pelosi and Schumer | The Washington Post

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Trump and Stoltenberg get into tense exchange at NATO summit

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

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Donald Trump Vs Nancy Pelosi: The Most Epic Clashes of All Time

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
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


President Donald Trump's Most Epic Gaffes of All Time

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

President Donald Trump's Infamous Gaffe Correction Strategy | All In | MSNBC

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




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Trump Being A Category 5 IDIOT

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When a real **president** was in power!!!

#Obama Slams #KariLake

Uncle **Trump** or Joe?

Knowles DESTROYS Cocky Environmentalist

Poor BLM Supporter Demolished By Allen West

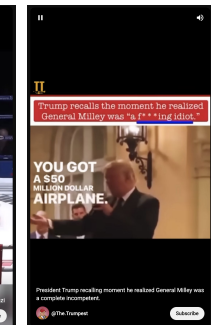
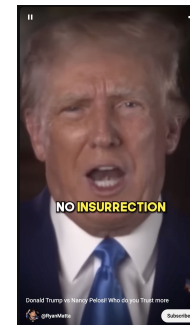
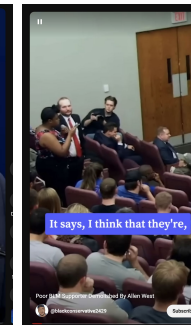
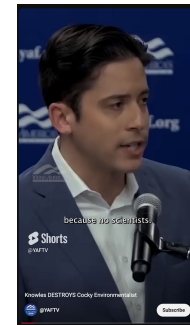
Tulsi Gabbard exposes the shocking life Ukrainians have under Zelenskyy

Donald **Trump** vs Nancy Pelosi! Who do you Trust more

Never judge by the size! Fedor's protege vs a Nazi

President **Trump** recalling a moment he realized

General Milley was a complete incompetent.





 Was Obama right?


Got back to
Trump


Stuck in a Vox
hole of
random
subjects


Was Obama a Good President?
Channel 4 News  2.42M subscribers
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Why Obama is one of the most consequential presidents in American history
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Impeachment is broken. Impeach Trump, anyway.
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The Krebs Cycle

Doctor Explains Why Ripped Abs Aren't Healthy For Women

Hitler's Embarrassing Art | Forgotten History

How strong is an epoxy table?

Don't contaminate the OR

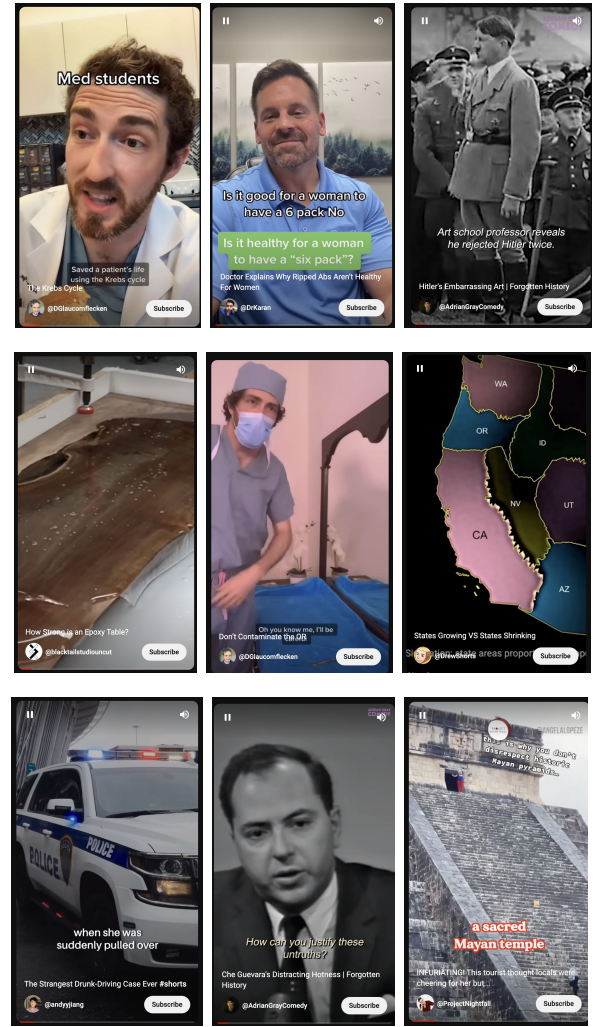
States Growing vs States Shrinking

The Strangest Drunk Driving Case Ever

Che Guevara's Distracting Hotness

INFURIATING! This tourist thought locals were cheering for her but...

Ranjay Krishna | ranjay@cs.washington.edu



 Was Putin right?

American and non-American mix of outlets

Is Putin Right About Nato's Eastward Expansion? - TLDR News

 TLDR News EU ✓
576K subscribers

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Longer lectures and thought pieces

Some historical items

Very consistent in content about Ukraine / NATO


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Ukrainian Soldier shoots down Russian Cruise Missile with MANPADS

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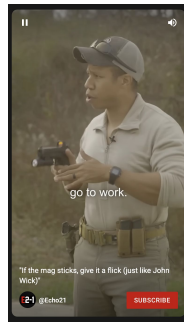
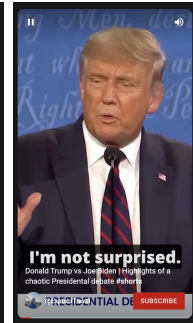
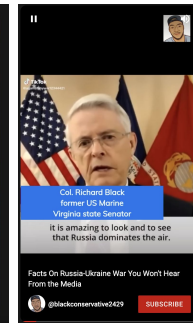
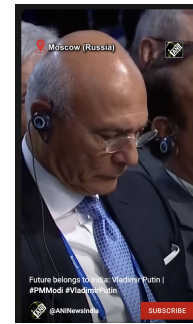
Abdul Rehman Bijli Kabaddi in Sidhawali part 21

What really Britisher did in India?

The STRONGEST guy you've never heard of!

“If the mag sticks, give it a flick (just like John Wick)”

Ranjay Krishna | ranjay@cs.washington.edu



 Was Marjorie Taylor Greene right?

All newly released

MSNBC hole

Back at Trump!

Analysis: Why Marjorie Taylor Greene should be very happy right now
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Georgia grand jury completes Trump election investigation; what happens now?
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Many 'avenues to pursue' in potential George Santos prosecution
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Now George Santos says he's black?

#mcconnell Should Be Blamed For The Lack Of A #redwave

This Life

The STRONGEST guy you've never heard of!

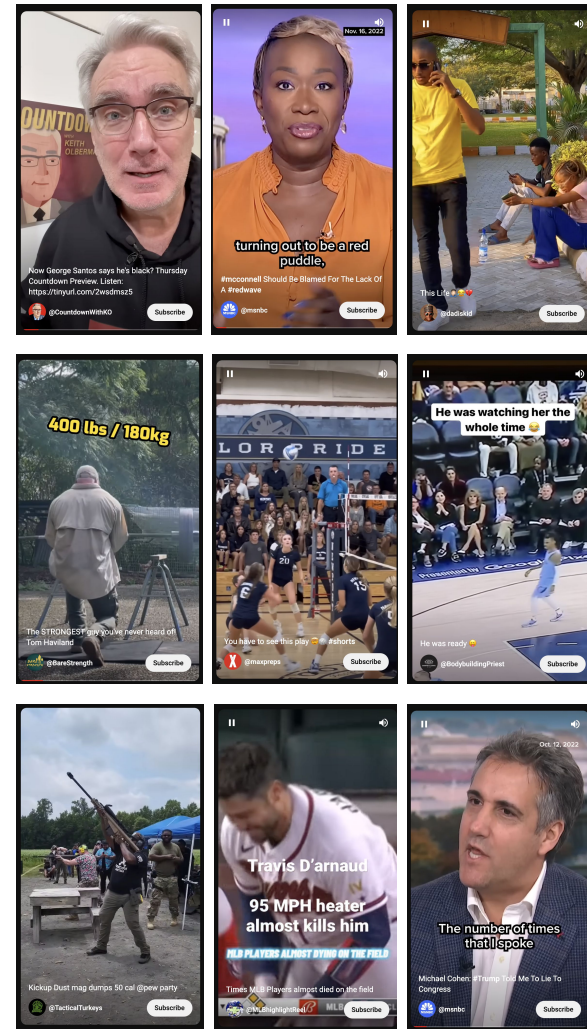
You have to see this play

He was ready

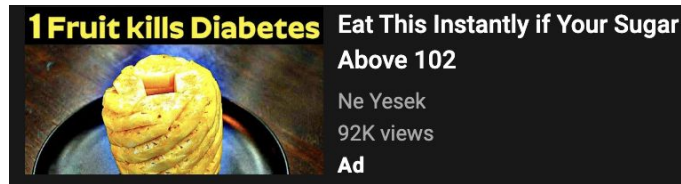
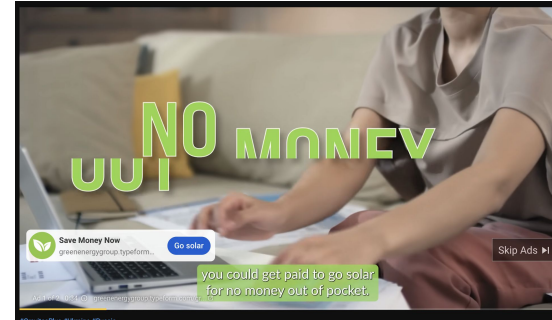
Kickup dust mag dumps 50 cal

Times MLB players almost died on the field

Michael Cohen: #Trump Told Me To Lie To Congress



Ads and keywords



Limitations

- Kept running in background with audio off, didn't always actually watch, probably tracked that
- Leading search term
- Random group of people I thought might be interesting
- Each time different, and 10 not many videos

Takeaways

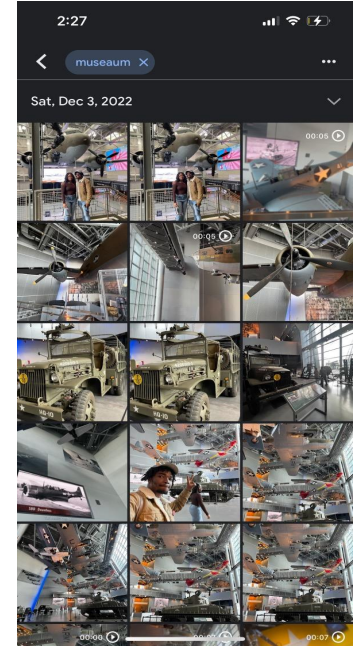
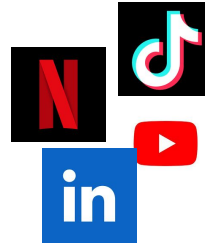
- Reminder that we're all on a very particular part of the internet
- Did feel temptation to click on others with intense headlines
- Directed towards chaos

Past 2 Weeks Interactions With AI

Wisdom Ikezogwo

Assistant, Search and Recommendation engines

- Search photos, even with incorrect words
- Recommend entertainment, internships, etc.
- Alexa takes instructions -ish:
 - “Alexa, set an alarm for 8:00am!” OR “Alexa, play music by ...?”
 - Needs more diverse data to work well for various accents/dialects, as today asking alexa to play a wizkid song can be a bad idea.
- Customer service AI agents.
 - Depending on the egregious scale of the transgression for which you are calling about- this agents might not feel helpful.
 - I want to talk to a real agent!!!



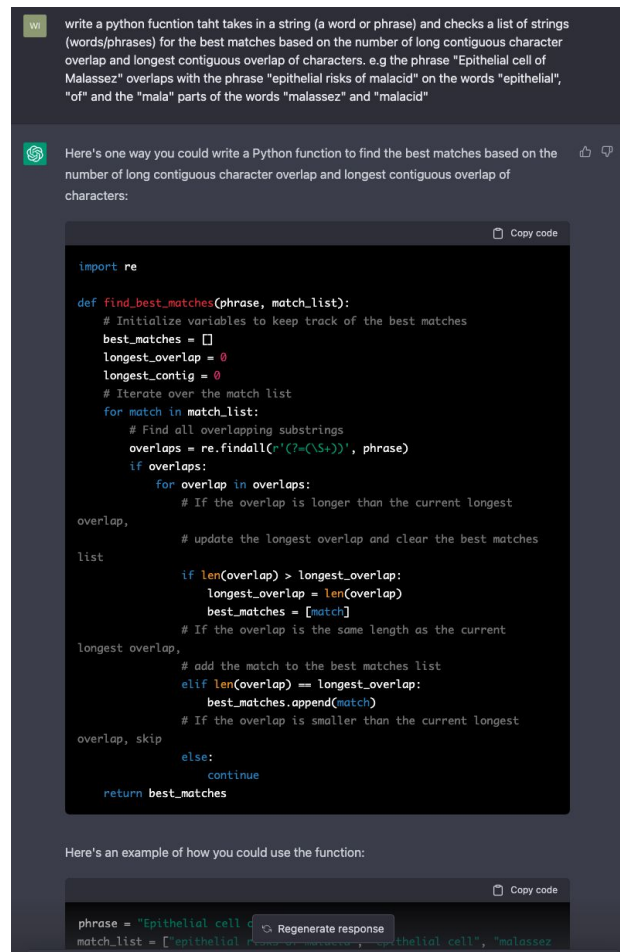
EA Sports FIFA 23

- Learning from more than 8.7 million frames from Advanced 11v11 Match Capture, the ML algorithm writes new animations in real-time, enabling players to better adjust their stride and running cadence on approach to the ball to control or strike it more smoothly for attacks, and it helps in defense by giving teams the ability to act as a tactical unit, retaining their shape to move across the pitch and cover vacant space, amongst many other things.
- **I appreciate the effort that must have gone into collecting full body data and the modelling that makes playing AI this days really feel like playing a friend, a real person. Only thing is it can be a little bit hard, but that's what difficulty settings are for.**



ChatGPT-Ception

- Using ChatGPT to write code that postprocesses ChatGPT output 🙄
- Its not without its issues like outright hallucination of concepts.



write a python function taht takes in a string (a word or phrase) and checks a list of strings (words/phrases) for the best matches based on the number of long contiguous character overlap and longest contiguous overlap of characters. e.g the phrase "Epithelial cell of Malassez" overlaps with the phrase "epithelial risks of malacid" on the words "epithelial", "of" and the "mala" parts of the words "malassez" and "malacid"

Here's one way you could write a Python function to find the best matches based on the number of long contiguous character overlap and longest contiguous overlap of characters:

```
import re

def find_best_matches(phrase, match_list):
    # Initialize variables to keep track of the best matches
    best_matches = []
    longest_overlap = 0
    longest_contig = 0
    # Iterate over the match list
    for match in match_list:
        # Find all overlapping substrings
        overlaps = re.findall(r'(?=\S+)', phrase)
        if overlaps:
            for overlap in overlaps:
                # If the overlap is longer than the current longest
                # update the longest overlap and clear the best matches
                list
                if len(overlap) > longest_overlap:
                    longest_overlap = len(overlap)
                    best_matches = [match]
                # If the overlap is the same length as the current
                # add the match to the best matches list
                elif len(overlap) == longest_overlap:
                    best_matches.append(match)
                # If the overlap is smaller than the current longest
                # skip
            else:
                continue
    return best_matches
```

Here's an example of how you could use the function:

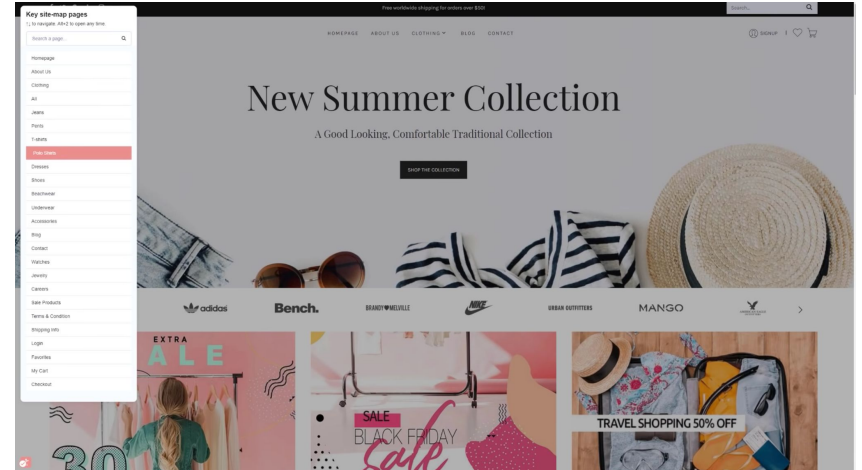
```
phrase = "Epithelial cell of Malassez"
match_list = ["epithelial", "risks of malacid", "epithelial cell", "malassez"]
```


Reflection on Societal Implication and Personal Use of AI

Rock Pang

AI and Accessibility

- You own an e-commerce website
- You want to make it accessible
- There are a dozens companies can help you do it using AI to format the page!



Seems working great!

For Blind Internet Users, the Fix Can Be Worse Than the Flaws

Companies say their A.I.-powered tools are the best way to fix accessibility problems online, but many blind people find they make websites harder to use.

Largest U.S. Blind Advocacy Group Bans Web Accessibility Overlay Giant AccessiBe From Its National Convention

Gus Alexiou Contributor ©

I write about accessibility, inclusion and social justice.

Follow

#accessiBe Will
Get You Sued

Updated December 12, 2022, originally posted June 29, 2020; [34 Comments](#)

Blind people, advocates slam company claiming to make websites ADA compliant

“If you have a website, do you want to include disabled people or do you want to exclude them? That’s why it’s a civil right,” one expert said.

Not only on web.

- Have you tried to add alt text on your Google Slides or PowerPoint presentation?

Example: PageRank Scores

Node	PageRank Score
A	3.3
B	38.4
C	34.3
D	3.9
E	8.1
F	3.9
Small Nodes	1.6

Alt Text

How would you describe this object and its context to someone who is blind or low vision?

- The subject(s) in detail
- The setting
- The actions or interactions
- Other relevant information

(1-2 detailed sentences recommended)

Diagram
Description automatically generated

Mark as decorative

Not only on web.

- Have you tried to add alt text on your Google Slides or PowerPoint presentation?

Example: PageRank Scores

How would you describe this object and its context to someone who is blind or low vision?

- The subject(s) in detail
- The setting
- The actions or interactions
- Other relevant information

(1-2 detailed sentences recommended)

An example to illustrate the PageRank Scores. The scores of all nodes sum to 100. Node B has lots of other pages point to it. Therefore it has a very high score. Node C has one connection with only node B but node C also has a high score because it's connected with an important node B.

Mark as decorative

1/10/23 Tim Althoff, UW CS547: Machine Learning for Big Data, <http://www.cs.washington.edu/cse547> 20

ChatGPT?

T How to make Powerpoint accessible to blind users?



PowerPoint, like many other software programs, can be made accessible to blind users through the use of assistive technology, such as screen readers, and by following certain best practices. Here are a few ways to make PowerPoint presentations more accessible to blind users:

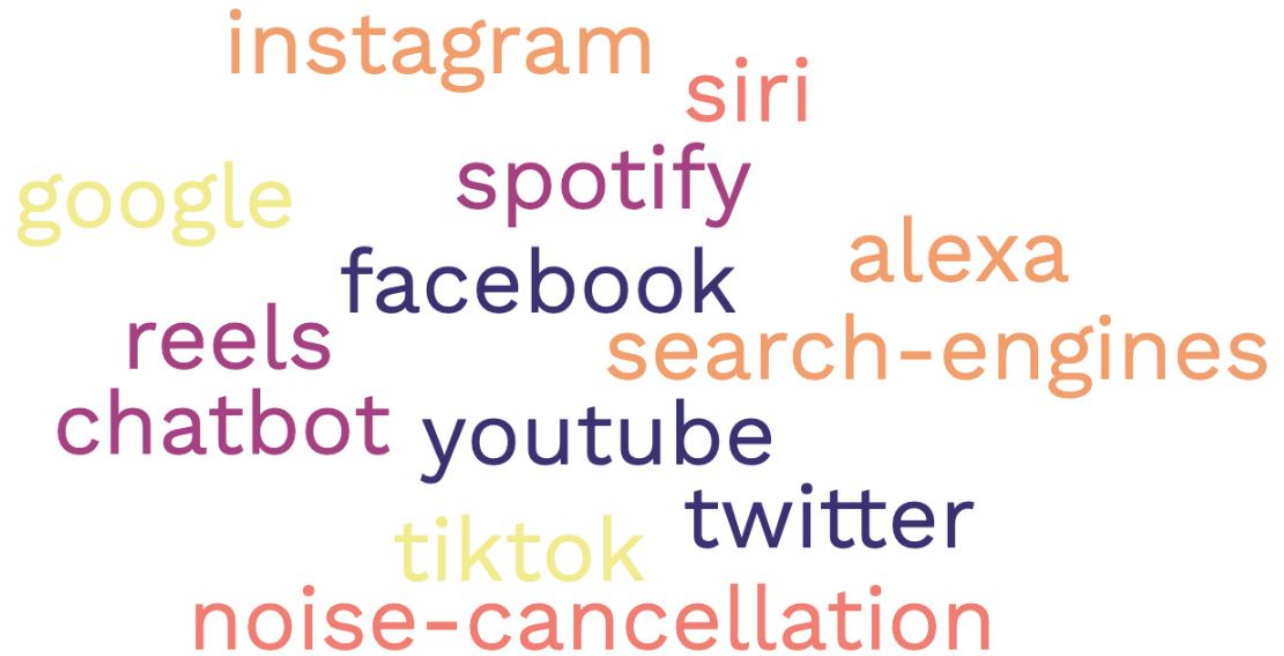


1. Use the built-in accessibility features: PowerPoint includes built-in accessibility features that can help make your presentations more accessible to blind users, such as the "Add Alt Text" option, which allows you to add a text description of images in your presentation.
2. Use headings and lists: Use headings and lists to organize your content and make it easier for screen readers to navigate your presentation. Use proper headings styles (H1, H2, ... H6) for titles and sections.
3. Add descriptions to charts and tables: Describe the data represented in charts and tables using the "Add Alt Text" option or using the captions feature, if available.
4. Avoid using non-text elements: Avoid using elements such as images, charts or diagrams that convey important information without an alternative way of conveying that information.
5. Use the built-in "Accessibility Checker": PowerPoint has a built-in accessibility checker that can help you identify potential accessibility issues and provide suggestions for resolving them.
6. Check for compatibility with screen readers: Test the presentation with different screen readers to ensure compatibility, especially if you're going to use specialized software and plug-ins, or custom templates.
7. Provide a transcript: Provide a transcript of the presentation for users who may not be able to hear the audio or watch the video.

It is also important to note that accessibility is an ongoing process, and regular testing and updates will be required to maintain accessibility over time. And it is important to keep in mind that there's no single one-size-fits-all solution and it's best to consult with someone who is proficient with the use of assistive technology to ensure the best accessibility solution.

AI and Me

Mayank Kumar



A word cloud of AI-related terms. The words are arranged in a roughly circular pattern. The largest word is 'noise-cancellation' at the bottom. Other prominent words include 'instagram', 'siri', 'google', 'spotify', 'facebook', 'alexandra', 'search-engines', 'youtube', 'twitter', 'tiktok', 'reels', and 'chatbot'. The colors of the words vary, including shades of orange, purple, blue, green, and red.

instagram siri
google spotify
facebook alexa
reels search-engines
chatbot youtube
tiktok twitter
noise-cancellation

Generated using: <https://www.freewordcloudgenerator.com/generatewordcloud>

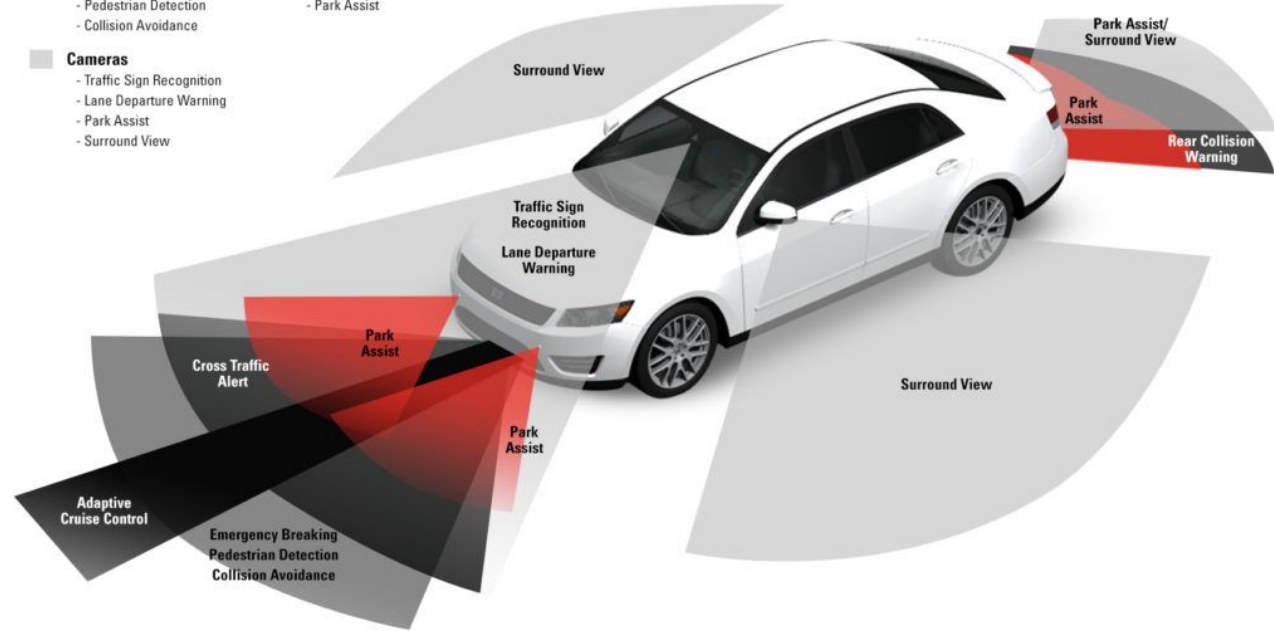
My first exposure to AI in practice.

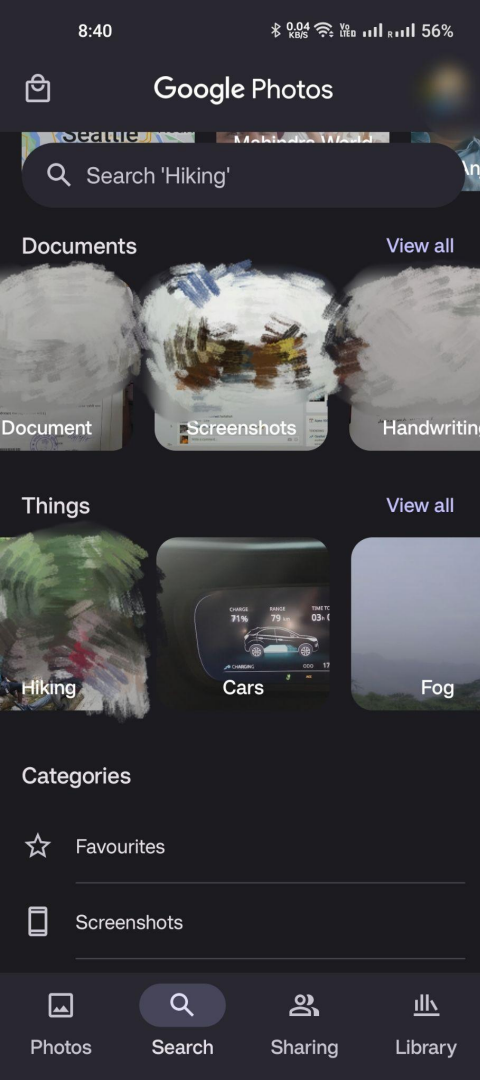
Features that are considered as part of level 3 autonomy in transportation.

- Increased driver and pedestrian safety
- Less tiring driving experience

ADAS: THE CIRCLE OF SAFETY

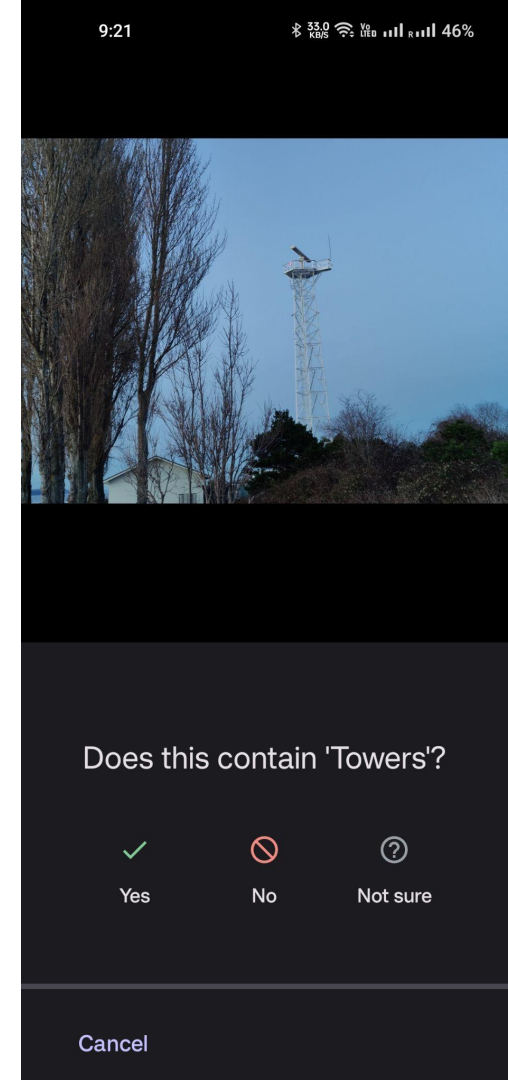
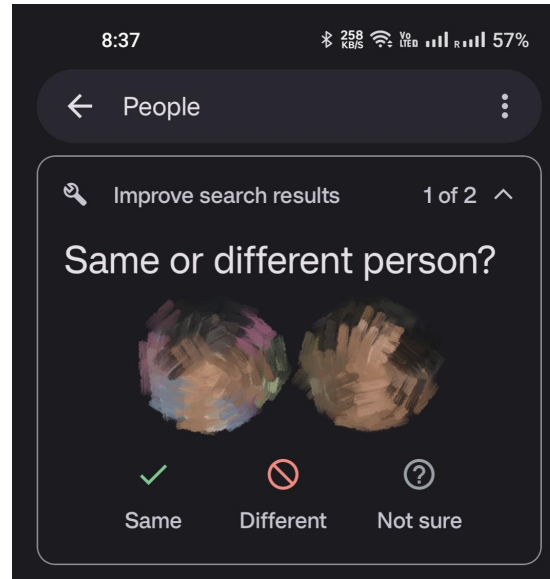
- Long-Range Radar**
 - Adaptive Cruise Control
- Short/Medium-Range Radar**
 - Cross Traffic Alert
 - Rear Collision Warning
- LIDAR**
 - Emergency Braking
 - Pedestrian Detection
 - Collision Avoidance
- Cameras**
 - Traffic Sign Recognition
 - Lane Departure Warning
 - Park Assist
 - Surround View
- Ultrasound**
 - Park Assist





Google Photos

- Organizes
- Image search by using simple english you can search by people, activity, item etc.
- Automatic identification for **post-processing**
- **Animation** using the available photos.
- **Human-in-loop** to improve results

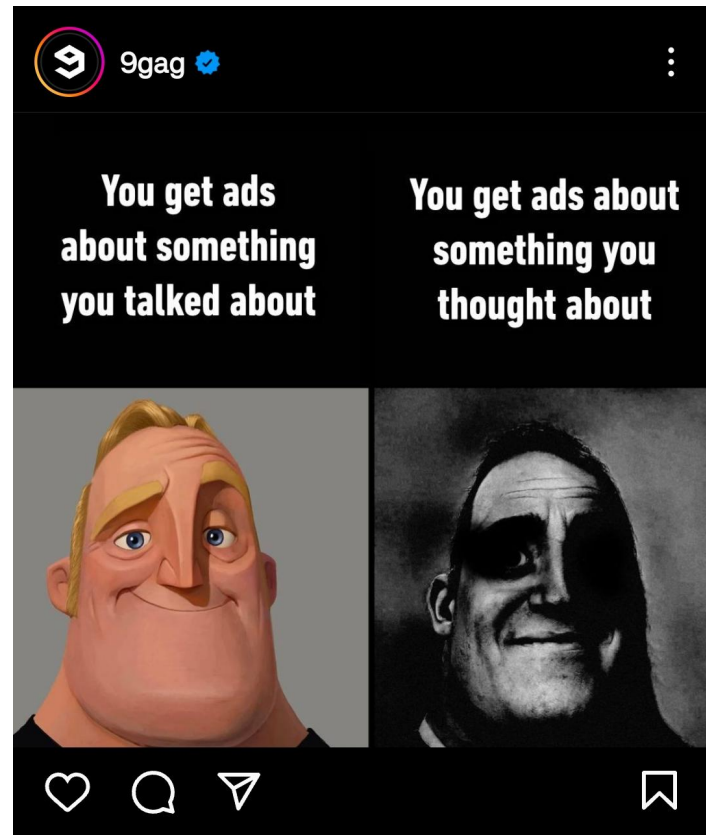


Recommendations: Content and Ads

Sometimes they are freakishly accurate
E.g. talking with your friend about buying shoes, next you open an App, your feed is filled with ads for shoes.

Source of inputs:

- Interactions with the portals
- Camera and microphones on the devices
- Inter-App data sharing



Thoughts that cross-paths

Can AI create **bias** in society? Can they be used to impact **policy making**?

Can AI lead to **addictions** of some sorts?

Is the process of delivering AI **transparent** enough to build trust? Is it **private**?

But also,

Can we make them even **more smart**?

Can we make machine **see and perceive** world better?

Can AI be used to reduce **digital clutter** and provide better user experience?

Augmenting Intelligence vs Augmenting Inequality: “AI” in Healthcare

Niveditha Kalavakonda

AI in Healthcare - A field with immense potential

NICOLE KOBIE SCIENCE 01.01.2020 06:00 PM

DeepMind's new AI can spot breast cancer just as well as your doctor

Early research suggests Google's algorithm can improve the accuracy of mammogram screenings, potentially alleviating some of the UK's radiologist shortage

AI In HealthCare Is Making Our World Healthier

Cindy Gordon Contributor @
CEO, Innovation Leader Passionate about Modernizing via AI



HEALTH

Artificial intelligence could soon diagnose illness based on the sound of your voice

October 10, 2022 - 5:00 AM ET
Heard on Morning Edition

Israel is using AI to flag high-risk covid-19 patients

But the approach, which works best with access to lots of patient data, probably won't be as effective in the US.

By Will Douglas Heaven

April 24, 2020

Google researchers find trained AI detects diabetic retinopathy on par with experts

By Laura Lovett | March 14, 2018 | 03:58 pm

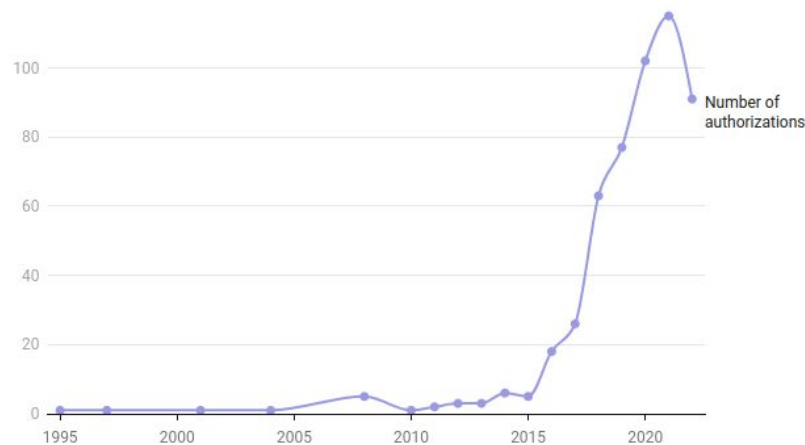
SHARE < Share 130



So it works well! Yes, but...

- Algorithms in healthcare are under-regulated, especially in clinical, administrative and public health settings
 - Predicting risk of mortality
 - Likelihood of readmission
 - In-home care needs
- Lack of public information on systems being approved by the FDA
 - No defined standard for types of evaluations for AI systems (Eg: Multi-site assessments)
 - Geographic and population diversity information is not available for all studies

Number of approvals and clearances by the Food and Drug Administration per year.



Data is through Oct. 5, 2022.

Chart: Elise Reuter • Source: [The Food and Drug Administration](#) • [Get the data](#) • Created with [Datawrapper](#)

So it works well! Yes, but...

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It takes an average of five years and five doctors for autoimmune patients (75% of whom are women) to get a proper diagnosis. And more than half of those report being labeled as "chronic complainers."

Source: [Aubrey Hirsch](#)

Poorly designed AI systems can cause real harm

The image is a collage of several news article snippets, each highlighting a different instance of AI-related harm or bias. The snippets are arranged in an overlapping, non-linear fashion. The top-left snippet is from Reuters, dated April 9, 2021, titled "Study flags gender bias in Facebook's ads tools" by Paresh Dave. The top-right snippet is from Reuters, dated January 2, 2022, titled "Crime Prediction Keeps Society Stuck in the Past" by Chris Gilliard, with a sub-headline: "So long as algorithms are trained on racist historical data and outdated values, there will be no opportunities for change." The middle snippet is from Thomson Reuters Foundation, dated June 7, 2021, titled "AI is taking over job hiring, but can it be racist?" by Avi Asher-Schapiro. The bottom-left snippet is from Forbes, dated September 2, 2021, titled "A.I. Bias Caused 80% Of Black Mortgage Applicants To Be Denied" by Kori Hale. The bottom-right snippet is from Reuters, dated May 27, 2022, titled "An Autonomous Car Blocked a Fire Truck Responding to an Emergency" by Adrian Marshall, with a sub-headline: "The incident in San Francisco cost first responders valuable time, and underscores the challenges Cruise and other companies face in launching driverless taxis." The bottom-most snippet is from Reuters, dated September 6, 2022, titled "Iranian Government Admits using Facial Recognition to Identify Women Violating Hijab Rule" by Preetipadma K.

REUTERS® World Business Legal Markets Breakingviews Technology

Technology

2 minute read · April 9, 2021 5:12 AM PDT · Last Updated 2 years ago

Study flags gender bias in Facebook's ads tools

By Paresh Dave

CHRIS GILLIARD IDEAS JAN 2, 2022 7:00 AM

Crime Prediction Keeps Society Stuck in the Past

So long as algorithms are trained on racist historical data and outdated values, there will be no opportunities for change.

AI is taking over job hiring, but can it be racist?

by [Avi Asher-Schapiro](#) | [@AASchapiro](#) | Thomson Reuters Foundation
Monday, 7 June 2021 05:01 GMT

FORBES > MONEY > PERSONAL FINANCE

A.I. Bias Caused 80% Of Black Mortgage Applicants To Be Denied

Kori Hale Contributor ©
I'm the CEO of CultureBanx, redefining business news for minorities. [Follow](#)

Sep 2, 2021, 07:48am EDT

ADRIAN MARSHALL BUSINESS MAY 27, 2022 7:00 AM

An Autonomous Car Blocked a Fire Truck Responding to an Emergency

The incident in San Francisco cost first responders valuable time, and underscores the challenges Cruise and other companies face in launching driverless taxis.

Iranian Government Admits using Facial Recognition to Identify Women Violating Hijab Rule

The government of Iran plans to use facial recognition technology in public places to identify women who do not adhere to the new law on wearing the hijab

By **Preetipadma K** September 6, 2022

Automated decisions can make or break medical care

NEWS | 24 October 2019 | Update [26 October 2019](#)

Millions of black people affected by racial bias in health-care algorithms

Study reveals rampant racism in decision-making software used by US hospitals – and highlights ways to correct it.

TOM SIMONITE BUSINESS JUN 21, 2021 11:00 AM

An Algorithm That Predicts Deadly Infections Is Often Flawed

A study found that a system used to identify cases of sepsis missed most instances and frequently issued false alarms.

Mar 21, 2018, 6:00 AM PDT
[0 Comments / 0 New](#)



What happens when an algorithm cuts your health care

BUSINESS OCT 26, 2020 7:00 AM

Ranjay Krishna | ranjay@cs.washington.edu

ARTIFICIAL INTELLIGENCE

Google's medical AI was super accurate in a lab. Real life was a different story.

If AI is really going to make a difference to patients we need to know how it works when real humans get their hands on it, in real situations.

BRIEF REPORT | APPLIED MATHEMATICS |



Gender imbalance in medical imaging datasets produces biased classifiers for computer-aided diagnosis

Agostina J. Larrazabal, Nicolás Nieto, Victoria Peterson , , and Enzo Ferrante [Authors Info & A](#)

Edited by David L. Donoho, Stanford University, Stanford, CA, and approved April 30, 2020 (received for review October 30, 2019)

May 26, 2020 | 117 (23) 12592-12594 | <https://doi.org/10.1073/pnas.1919012117>

How an Algorithm Blocked Kidney Transplants to Black Patients

A formula for assessing the gravity of kidney disease is one of many that is adjusted for race. The practice can exacerbate health disparities.

What could help?*

- Acknowledging that AI systems are not one-size fits all
 - Working with experts across disciplines (health, law, policy, etc.,) proactively
 - Identifying appropriate studies to track changes in the software updates and its effects on both patients and medical providers
- Evaluating the potential harms of working in an unregulated space and communicating the limitations
- Stricter guidelines from the FDA for algorithms/AI affecting medical care
 - Impact assessment similar to “Medical Devices” ; Post-market analysis of devices to measure unintended consequences
- Algorithmic Accountability Act 2022 has been introduced to the Senate could hold software companies more accountable

Questions?

Real world patterns of health inequality and discrimination



Unequal access and resource allocation

Discriminatory healthcare processes

Biased clinical decision making

Discriminatory data



Sampling biases and lack of representative datasets

Patterns of bias and discrimination baked into data distributions

Application injustices



Disregarding and deepening

Exacerbating global health inequality and discrimination

Hazardous and discriminatory repurposing

World → Data

Use ← Design

Biased AI design and deployment practices



Power imbalances in agenda setting and design

Biased and exclusionary design, model building

Biased deployment, explanation and system




Reflections on Personalization and Privacy in AI

Rishi Jha

Background

- **Almost useful:** running shoes ads
- What personalization in AI systems do I value and what do they know about me?
 - Relationships, Income, Education, Industry, Employer Size, Homeownership, Parenting
- AI ↔ Data

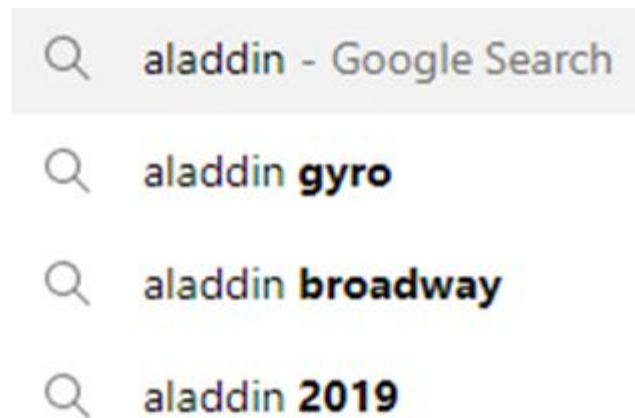
Your ads will be personalized using:

-  Your new and existing activity on Google sites and apps, including your general area while using them
-  Info from your Google Account, such as your age
-  Choices you make on My Ad Center, such as preferred ad topics and brands

You get to choose which info Google can use to personalize your ads.

One Approach: Optimization! (Kind of...)

- Maximize Personalization
 - Running ads were almost useful
 - Spotify
- Minimize Data Revealed
 - Active location, income, health
- **Tradeoff:** What am I comfortable with?



Brief Breakdown

Time of Day	Services	Information
Morning	<ul style="list-style-type: none">● Strava, Apple Health● NYT● Instagram :/, Spotify	<ul style="list-style-type: none">● Health information and biometrics● Political Leaning● Interests / Hobbies
Afternoon	<ul style="list-style-type: none">● Outlook, CoPilot● Google Maps, Google● NYT● Hulu	<ul style="list-style-type: none">● Work Hours / Habits● Live Location● Interests / Hobbies
Evening	<ul style="list-style-type: none">● NYT Cooking, Google● CoPilot● Spotify, YouTube	<ul style="list-style-type: none">● Dietary Restrictions● Interests / Hobbies

What's the balance

- No clue!
- **Frameworks:**
 - 'Hermitism'-Fatalism Spectrum
 - Personal data as a currency for personalization
- Control



Errors I've encountered (and, maybe how to handle them?) in the AI I work with

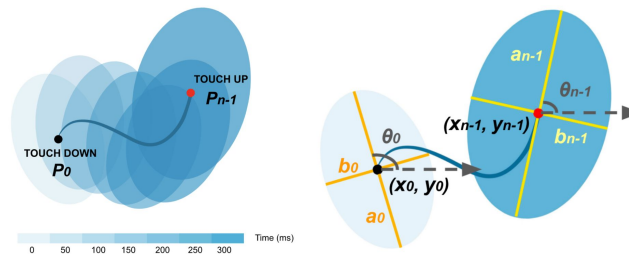
Junhan (Judy) Kong

AI I've worked with

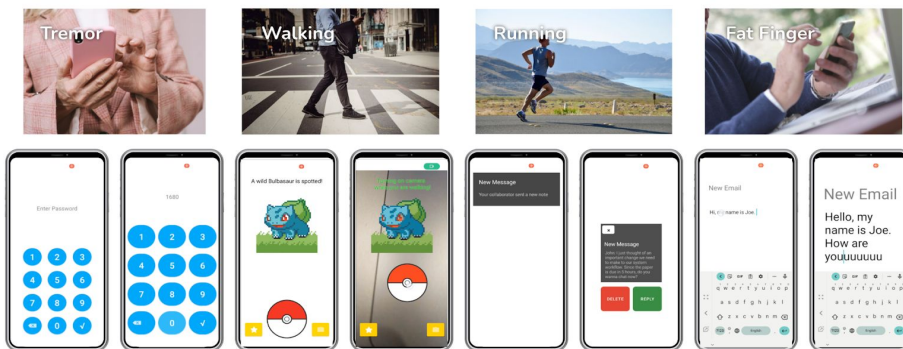
Understanding and enhancing human abilities with AI



Computer Vision
(2D and 3D)



Touch trace, physical activities, environments, etc.



Errors AI make and handling errors - the “last mile”

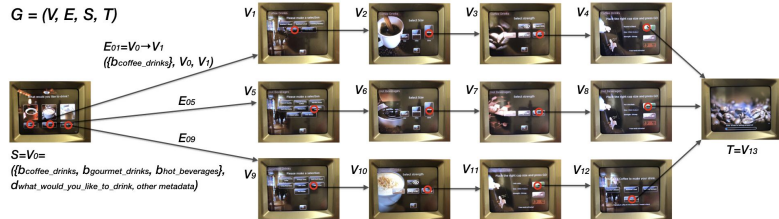


Mis-classifying a corner of whiteboard as a screen

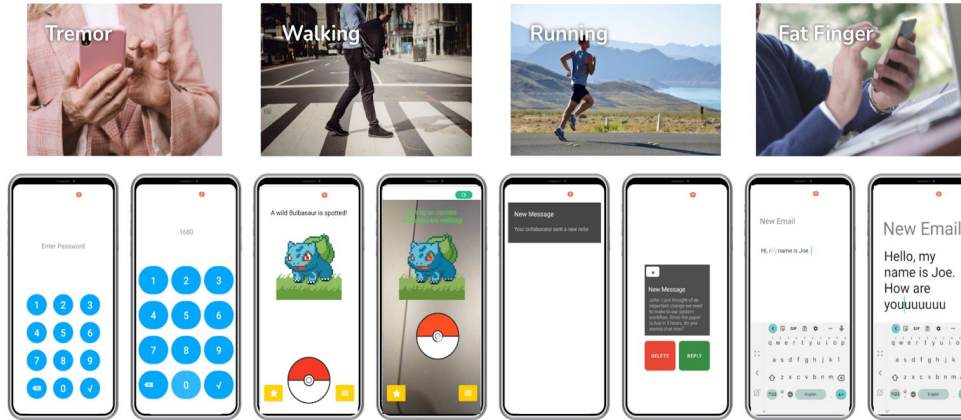
Thinking page A is page B

Not seeing the user finger due to varying backgrounds and light conditions

Unable to provide directions when finger is moving too fast



Errors AI make and handling errors - the “last mile”



Jump between “has tremor” and “no tremor”

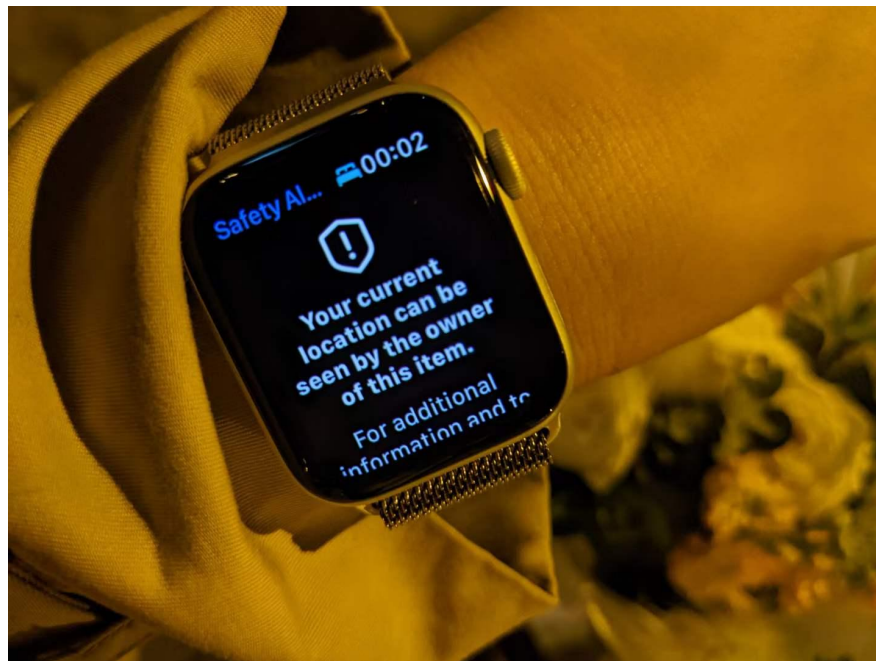
Taking a long time (10s of seconds) to detect walking / standing still

Unable to differentiate between an “intended long press” vs a “very long single tap due to limited fine motor function”

Errors AI make and handling errors - the “last mile”

Thoughts

- AI is getting faster and more accurate and robust, but new errors & challenges emerge
- Make design decisions while keeping it in mind that AI can and will make mistakes
- Flexibility and user control



Discussion 1

We will be sending out the list of the discussion role assignment by today, please keep a lookout for it on Canvas.

There are a total of 9 roles, with at least one role for each and 2 Discussion leader.

Each paper would take 45 minutes for discussion in class

Please be reminded to submit your commentaries 48 hours before the discussion class.