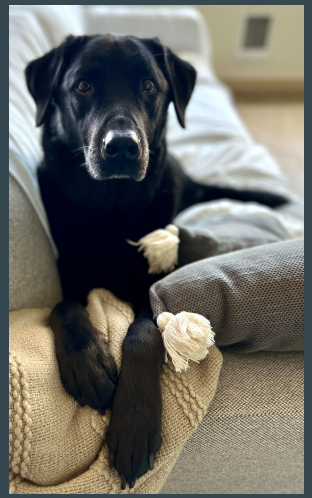
ResearchRadar

hackOMSCS 2024

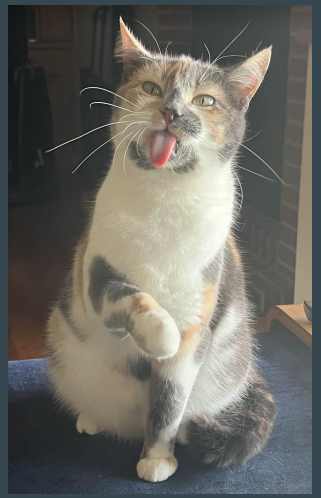
Ollie



Anubha

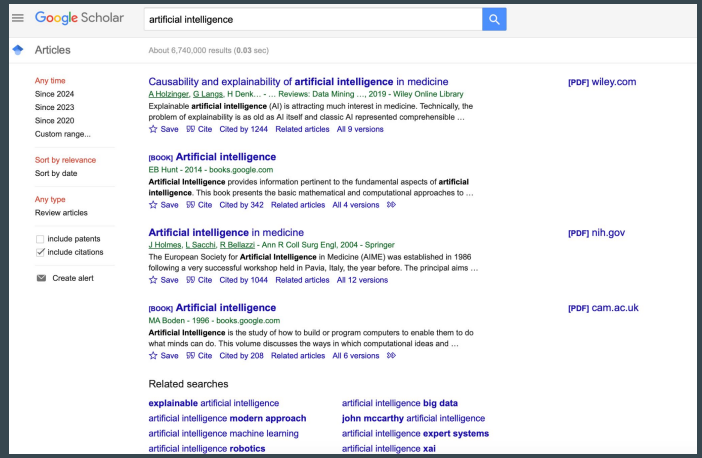
Emily DJ

Patches



Idea Generation

- Inspired by 2024 OMSCS Conference
- Hot Topic: Continued learning (PhD? Research lab?) or specialized learning space
  - Where to start?
  - Google Scholar - a great start, but overwhelming
  - Google Scholar Enforces its own sorting algorithm
  - How do we find top researchers?
- Initial Thoughts:
  - Can we simplify Google Scholar searches?
  - Could we find leading researchers?
  - Summarize their research?
  - Use Google Patents API to find top innovators?
  - Use Linkedin to follow top researchers and innovators?
  - So many thoughts...

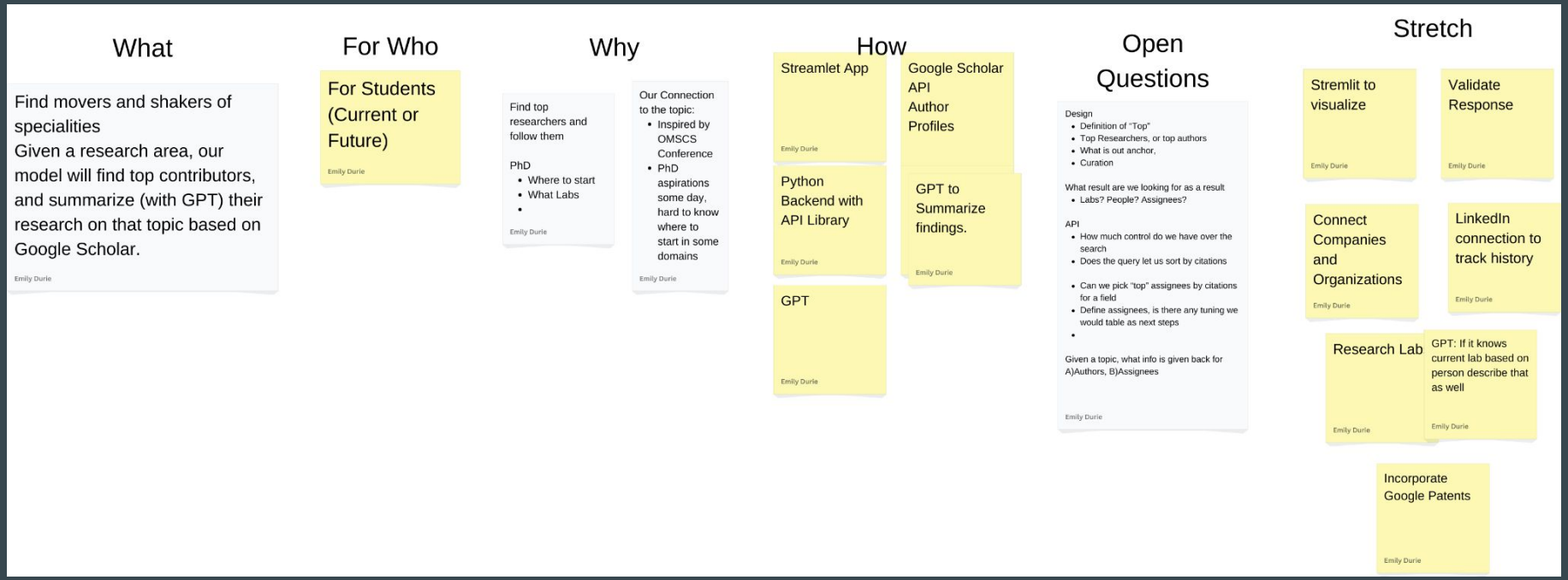


Elevator Pitch

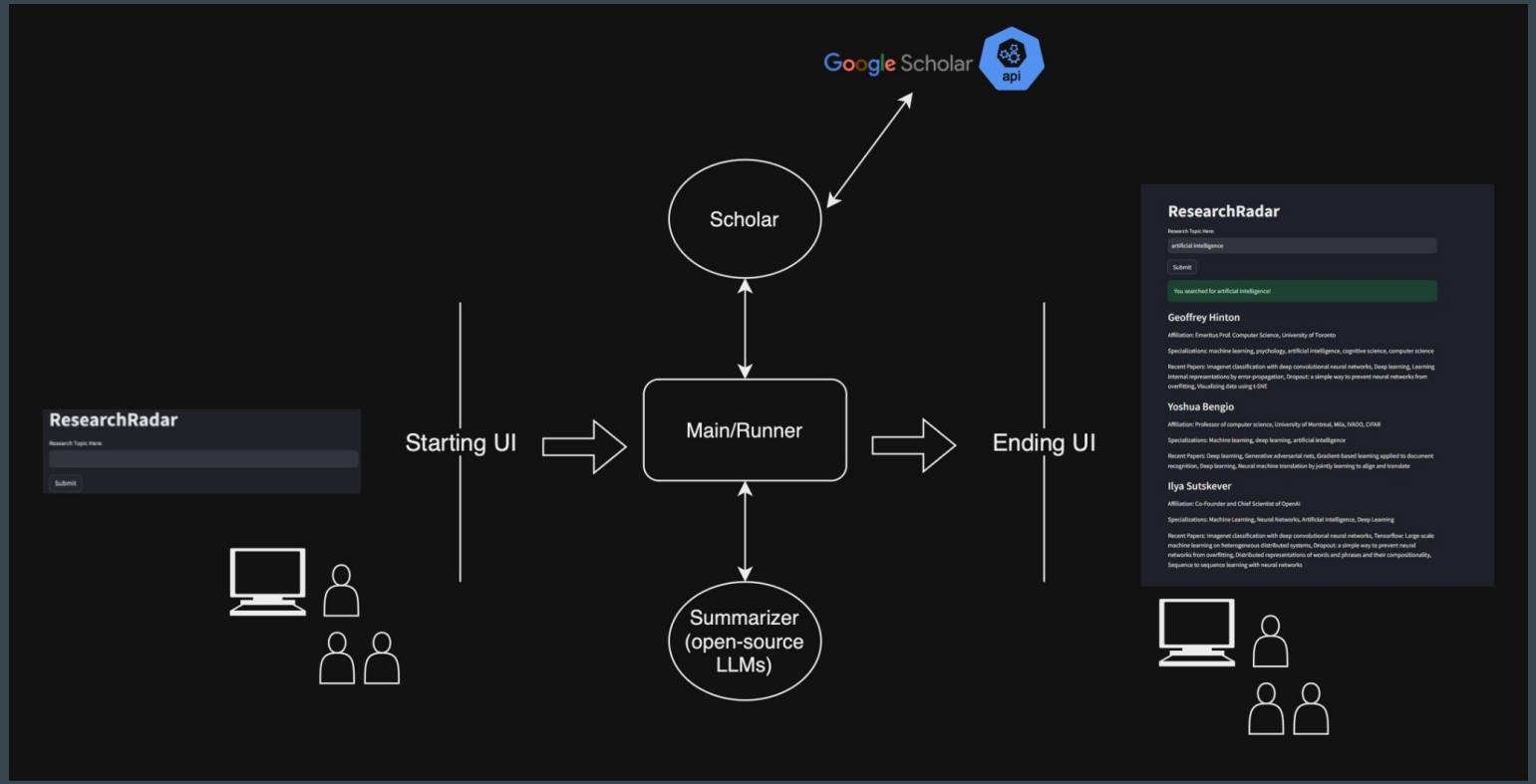
"*For students (current or future), there is no easy way to explore the various labs and researchers that might align with their interests. This leaves students, especially remote learners, bewildered and overwhelmed with all the information available online. We built an app that allows students to search for a research topic of interest to them, and returns a list of top researchers along with specializations, recent paper titles and a summary of their most recent research.*" - Emily & Anubha

"*Finding the right research opportunities as a student, especially in a remote learning environment, can be daunting. That's why we've developed an innovative solution. Our app simplifies the process by providing students with an easy way to explore various labs and researchers aligned with their interests. With just a few clicks, students can search for a research topic and receive a curated list of top researchers, complete with their specializations, recent paper titles, and summaries of their latest research. Our platform streamlines the search process, empowering students to discover exciting opportunities tailored to their academic pursuits.*" - ChatGPT

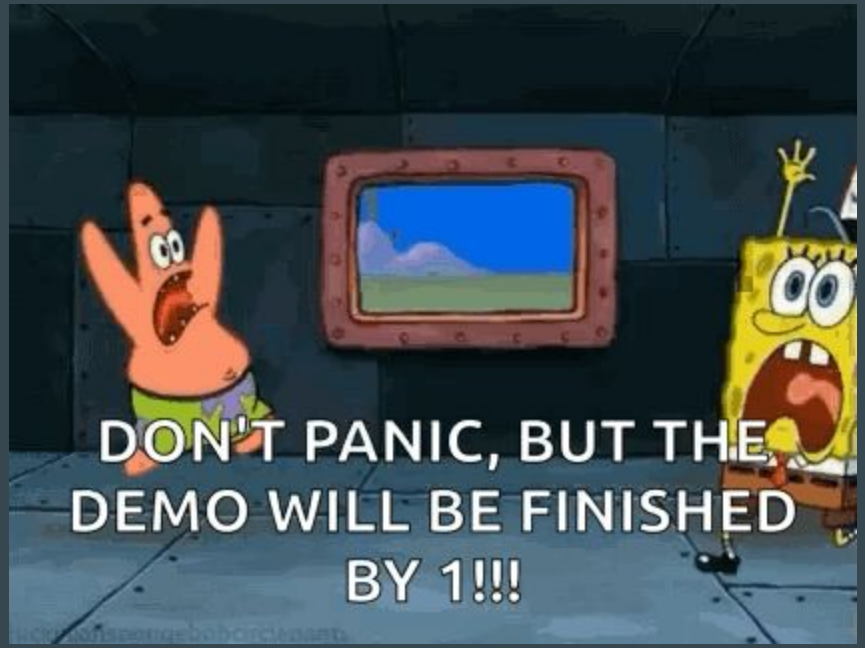
Planning Process



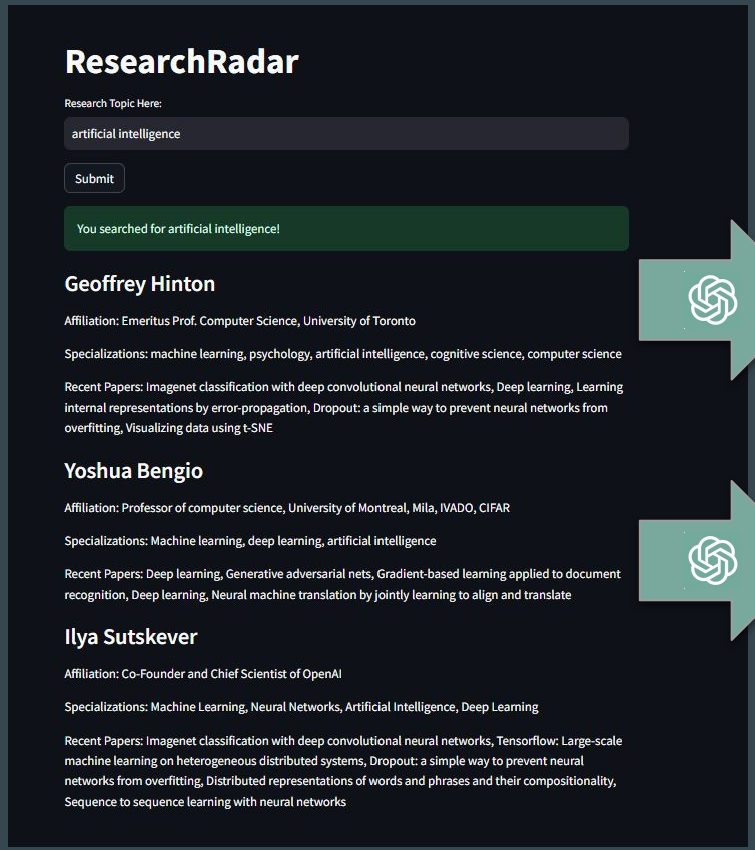
System Design



Live Demo



Ideal State: ChatGPT Integration



Simple prompt: 2-3 sentences requested

Geoffrey Hinton's latest research highlights significant advancements in deep learning methodologies. These include improved image classification accuracy with convolutional neural networks, techniques such as dropout to combat overfitting, and the development of t-SNE for advanced data visualization. These contributions underscore the ongoing evolution of machine learning techniques across diverse domains.

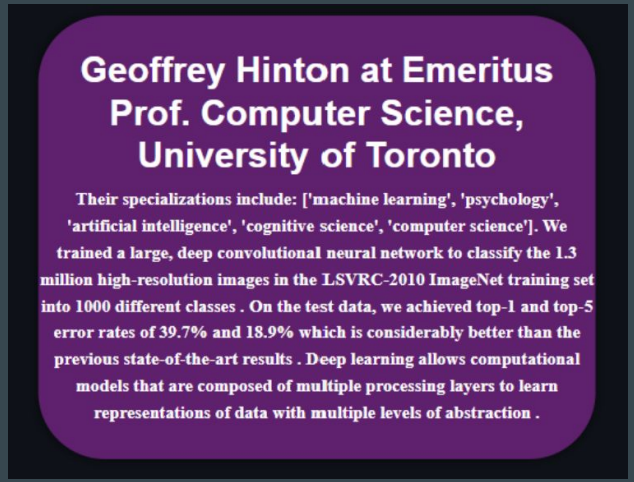
Updated prompt: 3-5 sentences requested with specifics

Yoshua Bengio's latest research illuminates specific advancements in deep learning methodologies. His work introduces novel frameworks like adversarial nets for generative modeling, enabling simultaneous training of generative and discriminative models. Additionally, Bengio's exploration of neural machine translation techniques, such as soft-search mechanisms, showcases advancements in improving translation performance without fixed-length vector constraints. These contributions offer tangible progress towards enhancing deep learning models' capabilities across domains like image generation and language translation.

Challenges

ChatGPT Charges for API Use

Sub-Par Alternative Summarization



Google Scholar API Monthly Limit

New Skills!

Google Scholar API

Canva

Python

ChatGPT

Prompt Engineering

Open Source LLMs

Streamlit UI