David Koplow

✉ dkoplow@mit.edu   in david-koplow   ⚙ DavidKoplow

Education

Massachusetts Institute of Technology (MIT)   Sep 2020 – Dec 2023
Artificial Intelligence (Course 6-4) and Neuroscience (Course 9) double major.   Cambridge, MA
- **GPA: 5.0/5.0**
- **Societies:** Phi Beta Kappa, Tau Beta Pi (top 10% Engineering) and Eta Kappa Nu (top 25% EECS), Schwarzman College of Computing Undergraduate Advisory Group (1 of 4 students chosen to represent AI major), Neo Scholar (top 30 EECS students nationally), OpenAI Forum, AI Advisor for the Maltese government (unofficial).
- **Activities:** AI@MIT, Prod, Phi Kappa Theta, Undergraduate Association Innovation Committee.
- **Courses:** Computational Cognitive Science [Graduate], Intro to Neural Computation, Computer Vision [G.], Parallel Processing and Scientific Machine Learning [G.], Real Analysis [G.], Artificial Intelligence [G.], Natural Language Proc.

Research and Projects

GPT-4 Ace MIT EECS Rebuttal   Jun 2023
EECS Student at MIT   Cambridge, MA
- Wrote a rebuttal to "Exploring the MIT Mathematics and EECS Curriculum Using Large Language Models" after it went viral on Twitter. The pre-print was originally co-authored by 15 individuals including 4 professors affiliated with MIT. The issues we identified culminated in the withdrawal of the paper.
- Our response also went viral attracting 3.4 million views and led to an article in the Chronicle of Higher Education.
- I was asked to speak about this to over 100 researchers and educators at a conference on LLMs in education run by MIT. List of other speakers. I also gave this talk to Tomaso Poggio's lab and was a panelist for MIT Generative AI Week.

Experience

Eta Kappa Nu Honor Society   Fall 2022 – Summer 2024
Co-President   Cambridge, MA
- HKN runs MIT's official EECS tutoring service and manages the largest student repository of class evaluations.
- Historically up to 50% of requests for tutors were not satisfied due to high demand and improper matching. I wrote a new algorithm that will substantially improve this match rate for future years.
- Started a committee to pair students with local non-profits to solve technical problems. Established a framework for compensation and legal protections for students. The non-profits indicated on their applications these problems cost them up to $10 million dollars and affect 1000s of people.

AI@MIT   Fall 2020 – Summer 2024
Co-President   Cambridge, MA
- Managing organization logistics and communication with the 500+ associate members and dozens of general members.
- Previously ran AI@MIT Labs where I managed 40 students building projects and helped resolve technical problems.
- Prior to that I was part of AI@MIT Labs, and built a number of projects including CV limb detection game, DALLE plant generation, and intra-building directions for campus.
- Designed and built our new website with NextJS aiclub.mit.edu.

Tau Clinical   Winter 2023 – Spring 2024
Co-Founder   Cambridge, MA
- Worked on start-up idea to speed up clinical trial regulatory submission by 2 weeks using artificial intelligence, that could have saved $1,000,000s in lost revenue.
- Accepted to Y Combinator and Prod, though chose not to continue to pursue this company.

Stem Development Inc.   Jun – Aug 2020
Consultant   Boston, MA
- Wrote 140+ Physics, Biology, and Chemistry interactive JavaScript simulations which are now being used to help teach concepts in the company's textbook series to every high schooler in Qatar.
- Streamlined the software architecture to enable quicker revisions to old and building of new simulations.

Technical Skills

Python	Used in projects, especially Numpy, Pandas, PyTorch, Scikit-learn, OpenCV, and Plotly libraries.
Julia	Language of choice, experience with DifferentialEquations, Flux, Zygote, and Diffractor packages.
TypeScript	Experience with React/Next.js, Flask, HTML, and CSS to build a number of websites.
Other	Experience with Java, C, Linux command line, Git, LaTeX, and x86-64 Bit Assembly.