Sammy Kao

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EDUCATION

Tufts University   Medford, MA
Bachelor of Science in Computer Science, Minor in Finance, GPA: 3.93/4   *Aug. 2022 – May 2026*

MIT Sloane Sports Analytics   Cambridge, MA
Mentorship Program   *March 2024 – Present*

IBM   Certificate
Applied AI Engineering Specialization, Full stack Engineering Specialization   *March 2024 – May 2024*

Deeplearning.AI   Certificate
Machine Learning Specialization, Unsupervised Learning Specialization   *February 2023 – June 2023*

University of Michigan   Certificate
Python for Everybody Specialization   *November 2022 – January 2023*

Duke University   Certificate
C++ Programming Fundamentals   *June 2022 – August 2022*

EXPERIENCE

Software Engineer Intern   May 2024 – Present
Imprivata   *Waltham, MA*
- AI R&D team

Technical Lead   Dec. 2023 – Present
Tufts University Friedman Institute   *Boston, MA*
- Building an app to onboard 1300 users from Tufts Free Food E-list
- Leading first ever student group to work with Tufts Technology Services

Software Engineer Intern   Feb. 2024 – May 2024
Starfin Ventures   *Irvine, CA*
- Built their customer price estimate page in React.JS
- Integrated SQL into Express.JS server to replace MongoDB
- Worked with a team to build price estimate Python API and clustering model

Intern   May 2023 – August 2023
Epoxy.AI   *Berwyn, PA*
- Conducted research into clustering techniques for iGaming users and AWS churn modeling
- Wrote scraping scripts in Python for marketing data collection
- Created automated marketing pipeline, leading to a $10,000 monthly increase in revenue

Co-founder   June 2023 – November 2023
Flowpa.co   *Philadelphia, PA*
- Freelance two-person side business building websites, AI chatbots, and ad marketing for small businesses
- Partnered with Philmont FC soccer club for a FAISS AI chatbot solution
- Partnered with Forward Progress Injury Care for google ad marketing
- Built PHP based website for Nephwz.com

Researcher   March 2023 – June 2023
Tufts University Human Factors Lab   *Philadelphia, PA*
- Conducted research into convergence algorithms for VR Face Evolution project
- Contributed code to project's ML model in Python

PROJECTS

Options Pricing API | *C++, gRPC, Makefiles, Options Modeling*   [Github Repository](#)
- Developed RPC architecture API for modeling option contract valuation during quantitative trading
- Implements Black Scholes modeling, Heston modeling, and Variance Gamma modeling for options pricing

CPU Emulator | *C, Assembly programming, Binary, Machine Structure*
- Developed a CPU and RAM emulator from scratch
- Developed RPN Calculator program in UMASM assembly to accompany emulator

AI Food Similarity Search | *Python, Flask, Beautiful Soup, HuggingFace, HTML, CSS, AWS*   [Website](#)
- Developed a search tool to find nearby restaurants based on an input picture
- Ranks and displays restaurants by their food image similarity
- Built on Flask server. Hosted on AWS using Ubuntu EC2. Uses pre-trained Salesforce Blip model for image recognition and Vgg16 model for cosine similarity analysis. Uses Bs4 for restaurant photo scraping and Scraping Bee API to bypass IP blocking. Front end built with Bootstrap

Twitter Sentiment betting tool | *Python, Flask, TensorFlow, Snscraper, HTML, CSS*   [Github Repository](#)
- The website is deprecated as of Sep. 2023
- Developed a tool to model the twitter sentiment of Philadelphia Union soccer fans compared to their betting lines in real time. Also aggregated with upcoming matches and recent news
- Trained a neural network on 200k tweets of data to analyze and outlay a NLP sentiment score

AI Notebook | *NodeJs, ExpressJs, MongoDB, PassportJs, HTML, CSS, JavaScript, Heroku*   [Website](#)
- Developed a web app to keep track of all your notes while using AI to optimize key insights within them
- NodeJs and ExpressJs backend w/ PassportJs for google authentication
- MongoDB for database, OpenAI API for note optimization, Bootstrap for frontend, and deployed on Heroku

LEADERSHIP

Player   Aug. 2022 – Present
Tufts University Men's Varsity Soccer   *Medford, MA*
- 30+ mandatory hours a week during the Fall and 20+ hours a week in the offseason
- 2023 NESCAC Finalist, 2023 D3 NCAA Sweet Sixteen, 2023 #4 ranked team in the country, 2022 D3 NCAA tournament second round

Co-Founder   Nov. 2023 – Present
NEPHWZ   *Philadelphia, PA*
- Social media brand curating Fashion, Art, Music, and Culture content
- 15k+ Followers on Instagram, 30M+ views in Spring 2024, 20M+ accounts reached in Apr. 2024

Researcher   Jan. 2023 – Present
Tufts Investment Club   *Medford, MA*
- Conducted research on options contracts and capitalizing on implied volatility
- Read my PE ratios paper: [Paper](#)

TECHNICAL SKILLS

Languages: C/C++, Python, PHP, JavaScript, SQL, HTML/CSS
Frameworks: React, Node.js, Express.js, Flask, Django, LangChain, FastAPI, Bootstrap
Developer Tools: AWS, Heroku, MongoDB, Google Cloud Platform, VS Code, PythonAnywhere
Libraries: TensorFlow, pandas, NumPy, gRPC, Selenium, Beautiful Soup, Snscrape, SFML, Pygame