Kyan Cox

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EXPERIENCE

University of Wisconsin - Madison   September 2024 – Present

AI/ML Undergraduate Researcher | Python, scikit-learn, MastML

- **Collaborated with a team of 10 peers** to develop machine learning models, utilizing **gradient-boosted trees** to identify key factors impacting donation campaigns for The River Food Pantry.
- **Applied predictive analytics and SHAP analysis** to evaluate model accuracy and interpretability, offering detailed insights into feature.

Visual Snow Initiative   May 2024 – Present

Lead Developer – Visual Snow Log | React Native, Expo, FastAPI, AWS (EC2), Docker, Supabase, PostgreSQL

- Developed a mobile app designed for those with Visual Snow Syndrome (VSS), a rare condition that affects ~3% of the world including myself, that allows users to log and track their VSS symptoms over time.
- Implemented user authentication and data storage using **Supabase** and **PostgreSQL**.
- Created a backend API with **FastAPI** and Python to handle data processing and export functionality, utilizing **Pandas** for data manipulation and the smtplib library for sending emails via SMTP.
- Deployed the backend on an **AWS EC2** instance, containerizing the application using Docker.

Outlier.ai   May 2024 – July 2024

AI Training (Contract) | Java, Python, JavaScript / TypeScript

- Evaluated AI-generated code using **RLHF** techniques to enhance **LLM** accuracy.
- Developed and implemented test cases for **Python** and **JavaScript**, ensuring high-quality AI performance.

Rye Chamber of Commerce   May 2023 – June 2023

Intern - Software | Python, Pandas, Git, Microsoft Excel

- Simplified a multi-day process of extracting and cleaning data from spreadsheets through **Python** and the **Pandas** library, aiding in the identification of over **200** potential customers, ultimately maximizing funds for events.
- Developed a mail merge process in **Python** to create outreach envelopes for prospective customers.

EDUCATION

University Of Wisconsin - Madison   September 2023 – May 2026

B.S. Computer Science, Statistics; Minor in Chinese Prof. Comm.   GPA: 4.00/4.00 (Dean's List)

Relevant Coursework: Object-Oriented Programming (Java), Multivariable Calculus, Data Structures and Algorithms (Java), Elementary Matrix and Linear Algebra, Intro to Computer Engineering, Machine Organization & Programming (C), Discrete Math

PROJECTS

LLM Comparison App | React, Next.js, Tailwind CSS, MongoDB, Node.js, TypeScript, Chart.js

- Developed a full-stack web application using **Next.js**, **React**, and **TypeScript** to compare responses from OpenAI's ChatGPT, Google's Gemini, and Anthropic's Claude, utilizing their respective APIs.
- Integrated **MongoDB** for data storage and management, and utilized **Node.js** for server-side operations, including API endpoints and middleware to enforce query limits for premium models, ensuring efficient and fair usage.

Cryptocurrency Investment Allocator | Python, Flask, SQLite, JavaScript, HTML/CSS, Pandas, RESTful API

- Architected and developed CoinMerge, a novel full-stack solution for private investors that keeps track of lucrative investments across Coinbase, Gemini, and Ledger, shortening a 1-hour allocation process into **5 minutes**.
- Created a **RESTful API** using **Flask**, featuring **14 endpoints** to manage customer information within an **SQLite** database, that seamlessly integrates three external APIs for dynamic data retrieval, and employs OOP principles to ensure scalability and a maintainable code architecture.
- Utilized **Pandas** to both create an XLSX file for customers that exports their assets from multiple services into one centralized portfolio and parse through Ledger Live's Operation History CSV.

COMMUNITY INVOLVEMENT & AWARDS

Patti Caponera Memorial Scholarship   *Rye Teachers Association* | June 2023

- Awarded this scholarship, named in honor after a late math teacher, for embodying a "love and appreciation of Mathematics, a great sense of humor and, most importantly, support and respect for peers and community."

Other Involvements: Software Development Club, LeetCode Club, Star Wars Club, Google Student Developer Club, Badger Blockchain

SKILLS

Languages: Java, Python, JavaScript, HTML/CSS, TypeScript, SQL, R, C

Frameworks: React, Next.js, React Native, Expo, Flask, FastAPI, TailwindCSS, Express.js, Pandas, NumPy, Matplotlib, scikit-learn

Development Tools: MongoDB, PostgreSQL, SQLite, AWS, Docker, Node.js, Supabase, Vercel, Git, Postman