Colin Zhao

+1 (914)-223-0536 | colinz@sas.upenn.edu | https://linkedin.com/in/zhao-colin | https://github.com/colinzhao0

EDUCATION

University of Pennsylvania   Philadelphia, PA
Bachelor of Engineering, Major in Computer Science, Minor in Economics   *Expected May 2028*
- Relevant Coursework: Linear Algebra, Data Structures and Algorithms, Introduction to Computer Systems, Programming Languages and Techniques
- 3.7/4.0 GPA

EXPERIENCE

Data Science Analyst   Expected October 2025
Barnes Foundation/Wharton Undergraduate Data Analytics Club   *Philadelphia, PA*
- Will conduct end-to-end data science consulting project involving statistical analysis, exploratory data analysis, and feature engineering to support museum decision-making.

Software Engineer   September 2025 - Present
Penn Aerial Robotics   *Philadelphia, PA*
- Developed a UAV computer vision payload detection algorithm leveraging binary thresholding with **OpenCV.**
- Built an internal position representation from drone camera data with **ROS2** integration.

Software/Data Center Build Intern   June 2025 - August 2025
Antalpha   *Atlanta, GA*
- Automated deployment and maintenance workflows for 630+ water-cooled GPU systems using AI agents build with **LangChain** and Python, improving configuration consistency and reducing manual setup time by 25%.
- Collaborated with engineers to configure and secure servers, firewalls, and switches, applying knowledge of TCP/IP, VLANs, and access control for reliable system integration.

Project Development Director   June 2023 - June 2024
AiGoLearning   *Princeton, NJ*
- Led a team of 4 in developing and maintaining educational technology projects, including automated tools and web applications for the "StemForAll" initiative.
- Designed and deployed a **Discord bot** in **Python** utilizing REST APIs and asynchronous event handling, reducing applicant response times by **40%**.

STARTUPS/PROJECTS

Collegize.ai - AI Personal College Counselor | *SQL, React, Next.js*   June 2025 - August 2025
- Led the development of a **full-stack** college application platform using **Next.js** and Supabase, implementing AI-powered features including personalized college recommendations, essay review, and strategic guidance
- Developed AI integration using Google's Gemini API for natural language processing, implementing document analysis, essay optimization, and personalized content generation

Macro Logger - Nutrition Tracking Mobile App | *SQL, ReactJS/React Native*   June 2025
- Developed a **full-stack mobile application** using **React Native** and **Node.js** that allows users to track daily nutrition intake using integration with the USDA Food Data Central API, with secure authentication via Clerk
- Built a RESTful API backend with **PostgreSQL** database integration, middleware rate limiting, and efficient data aggregation for nutritional summary analytics

Real-Time Gaze and Blink Tracking System | *Python, OpenCV*   June 2025
- Developed a computer vision system in Python using **OpenCV** and MediaPipe to track eye gaze and detect blinks in real time, including calibration and smoothing algorithms for robust performance
- Automated the collection and logging of gaze and blink data for downstream analysis, supporting research and accessibility applications

TECHNICAL SKILLS

Languages: OCaml, Java, Python, JavaScript, TypeScript, HTML/CSS, SQL
Developer Tools: Git, SQL, Linux
Frameworks: React, Node.js, LangChain
Libraries: pandas, NumPy, Matplotlib, scikit-learn, OpenCV