Alexander Yao

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Education

Thomas Jefferson High School for Science and Technology June 2023
High School Diploma *GPA: 3.93/4.0*

University of Virginia May 2026
Bachelor of Science in Computer Science and Bachelor of Arts in Mathematics *GPA: 3.88/4.0*

University of Virginia May 2027
Master of Science in Computer Science *In progress*

Experience

Technology Intern June 2026 - August 2026
Capital One Financial Corporation *Richmond, VA*

- Architected and built a shared interface layer bridging the Content-as-a-Service (CaaS) and Digital Asset Management (DAM) platforms on Capital One's Foundry platform, serving 200+ teams across all lines of business, and eliminated redundant integration logic across downstream teams
- Contributed to a production internal API migration by implementing and hardening over a dozen endpoints, shipping changes into production across a codebase shared by multiple internal teams
- Detected and resolved silent build failures within Capital One's Dev Exchange build pipeline, improving development workflow reliability for engineering teams

Software and Machine Learning Intern July 2025 – August 2025
Beach Point Capital Management *Santa Monica, CA*

- Created a research portal for analysts to query over company data and research notes using various Azure services
- Devised an algorithm to store text and graphs from various documents types using Azure document intelligence, search and vector indexes, and blob storages, and set up Model Context Protocol for the data sources
- Worked on improving machine learning models for predicting mortgage prepayment rates (6% accuracy increase)

Software Intern June 2024 – August 2024
RRE Ventures *New York City, NY*

- Developed an AI-driven due diligence tool for early-stage startups leveraging agents and Retrieval-Augmented Generation (RAG) architecture, integrated with APIs and webscraping to generate comprehensive investment memos in under 10 minutes
- Devised an algorithm to compile information from webscraping such that the product tops the market in accuracy
- Optimized report generating processes, achieving a 66.7% reduction in time while significantly cutting token costs, delivering substantial operational savings and enhancing tool efficiency

Projects

GoLoco | *Python, Github, Django* February 2025 – February 2025

- Developed a short-form social media platform specifically for browsing local small businesses
- Implemented third-party APIs such as Google to query for geolocation data and user logins
- Won 1st place for the City Exploration subtrack in the Hack Downtown hackathon hosted by WICS

Awards/Achievements

Google Code Jam 2nd Round Qualifier
USA Computing Olympiad (USACO) Gold Division
American Invitation Mathematics Exam (AIME) Qualifier for 2020, 2021, 2022, 2023

Technical Skills

Languages: Java, Python, JavaScript, C (coursework), Typescript, Vue
Developer Tools: Github, Visual Studio Code, Jupyter Notebook, Django, Azure, Elastic Search
Libraries: matplotlib, sklearn, datasets, pytorch, transformers, huggingface, langchain, wandb, accelerate, mcp