

Alex L. Yu

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EDUCATION

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| University of Virginia, Charlottesville, VA <i>B.A. Computer Science with Double Major in Commerce</i> | <i>Aug. 2020 – May. 2024</i> GPA: 3.93 |
| Thomas Jefferson High School for Science and Technology, Alexandria, VA <i>High School Diploma</i> | <i>May 2020</i> GPA: 4.49 |

WORK EXPERIENCE

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| Capital One, Associate Software Engineer | McLean, VA <i>Aug. 2024 – Present</i> |
| <ul style="list-style-type: none">Managed infrastructure for the platform and deployment pipeline supporting API and business logic for Consumer Identity.Orchestrated the transition of 30+ organization repositories to a new deployment workflow using Python scripts, eliminating several hundred hours of manual developer toil across 10 engineering teams.Spearheaded the development of the ETL Lambda based job for a new service to help drastically reduce deployment time of new configurations of Consumer Identity workflow logic.Developing a centralized tool to gather and archive information after a high severity incident, as a part of the Operational Excellence and Reliability division.Tool supports collaborative document editing up to 100s of concurrent users using a Lambda API and Yjs web-socket server running on ECS Fargate. | |
| Capital One, Software Engineering Intern | McLean, VA <i>Jun. 2023 – Aug. 2023</i> |
| <ul style="list-style-type: none">Architected and created an internal slack application aiding nearly 400 performing data stewards to better perform metadata checks/updates and easily view dataset metrics and tasks in the application dashboard.Refactored a metrics dashboard to scan 1000+ datasets that were uncompliant with enterprise data policies using backend APIs and integrated an AI assistant chatbot using Tensorflow and other Python NLP libraries.Utilized AWS ECS Fargate, S3, IAM, and implemented DevOps best practices for scalability and efficiency. | |
| Yext, Software Engineering Intern | Washington D.C. <i>May 2022 – Aug. 2022</i> |
| <ul style="list-style-type: none">Designed, bug fixed, and implemented search analytics on store locator pages using HTML, CSS and Javascript for notable companies/brands such as Sanrio Ltd., JD Sports, and Dunkin'. | |

PROJECTS

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| Comprehend, AI-powered application for natural language querying of APIs | <i>Nov. 2025 – Dec. 2025</i> |
| <ul style="list-style-type: none">Built a full-stack application, using a GraphQL API and LLM, to enable users to ask questions about external APIs and integration usecasesCreated a custom RAG pipeline (embedding schemas, vector search, and orchestrating LLM prompts) to generate accurate and context-aware responses. | |
| BoltId, “Proof-Of-Personhood” token identity platform | <i>Jun. 2025 – Jul. 2025</i> |
| <ul style="list-style-type: none">Built a full-stack identity verification platform for Bolt.new’s hackathon using Supabase for user auth, AWS Rekognition for biometric validation, and Algorand to issue and store tamper-proof identity tokens on the blockchain.Engineered a seamless onboarding flow using facial recognition, with a Node.js API and Vite.js frontend | |
| Algorithmic Trading Solution on Kalshi | <i>Dec. 2024 – Mar. 2025</i> |
| <ul style="list-style-type: none">Engineered an algorithmic trading strategy leveraging option market data from crypto exchanges. Estimated fair value and probability density using univariate splines, while warehousing data in Amazon S3.Optimized execution speed with Python multithreading and deployed a Flask-based backend with scheduled jobs, with plans to transition to an event-driven architecture using Amazon SQS.Automated data polling with cron jobs, sending real-time email alerts and entering trading opportunities. | |

ADDITIONAL INFORMATION

Languages and Technologies: Python, Java, Javascript, Typescript, HTML, SQL, CSS, React, Git, Jenkins, AWS

Certifications: AWS Solutions Architect - Associate (Feb. 2025)