Ashika Verma

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EDUCATION

Massachusetts Institute of Technology · Cambridge, MA
M.Eng. in Computer Science; GPA: 5.0; B.S. in Computer Science; GPA: 4.9 · *Aug. 2018 – Sep. 2022*

EXPERIENCE

Citadel Securities · New York, NY
Software Engineer · *Sep. 2022 - Present*

- Led a year-long initiative to overhaul the system design of the firm's capital management UI, resulting in significantly improved flexibility, maintainability, and usability. Achieved a remarkable reduction in deployment time from 30 minutes to just 3 minutes.
- Developed and integrated innovative features into the UI using React, TailwindCSS, RxJs, and Vite. Enhanced functionality and user experience while ensuring alignment with the specific needs of senior traders, COOs, and regulatory monitoring requirements.
- Currently spearheading a high-impact project to develop a trading fuse management UI for 100 traders at the firm. Aiming to streamline trading operations and enhance risk management efficiency through an intuitive and tailored user interface.

MIT Quest for Intelligence · Cambridge, MA
Student Researcher · *Jun. 2021 - Sep. 2022*

- Conducted a project to assess the robustness of image face recognition neural networks compared to human performance. Developed a clustering algorithm that utilized the feature vectors generated by the networks to determine face recognition accuracy.
- Designed and implemented experiments involving hue shifts and varying levels of blur as degradation techniques to evaluate the performance of the neural networks. Expanded knowledge of deep learning models, particularly ResNet, through practical application and experimentation during the project.

Kensho · Cambridge, MA
Software Engineering Intern · *Jun. 2021 - Aug. 2021*

- Led the implementation and design of new features on multiple public-facing websites, employing Node.js, Gatsby, React, TypeScript, and Emotion.
- Collaborated closely with a data science team to design a custom finance NLP model application using Figma. Translated the design into a seamless and intuitive user interface leveraging the React framework.

WP Engine · Austin, TX
Software Engineering Intern · *Jun. 2020 - Aug. 2020*

- Made significant contributions to the development and implementation of a suite of tools using Go, Docker, Kubernetes, GCP, Terraform, and Jenkins. Collaborated with the team to build and refine a Node application builder, API server, and CLI tool.

PROJECTS

- **Teensy U2F Security Key**: Developed a Teensy U2F Security Key in C++ that fully adheres to the FIDO2 U2F Protocol. Utilized a Teensy 3.2 microcontroller to design and implement the key, ensuring compatibility and successful integration with WebAuthn.
- **Security of CAT-SOOP**: Conducted a comprehensive security analysis of CAT-SOOP, the grading website for one of MIT's largest classes. Leveraged Python and BurpSuite to identify and exploit security vulnerabilities, resulting in the discovery of sensitive student data, gaining instructor permissions, and uncovering methods to effectively shut down the website server.
- **Ethereum To-Do List**: Developed a simple task management system by implementing an Ethereum-powered to-do list application using Solidity and leveraging smart contracts on the Ethereum blockchain.

PROGRAMMING SKILLS

- **Languages**: TypeScript, Python, C++, Go, q   **Technologies**: React, Node.js, Next.js, kdb+