Steven Xie

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Education

University of California, Irvine	09/2023 – 03/2025

Major: Master of Science in Data Science

University of California, Santa Cruz	09/2021 – 06/2023

Major: Bachelor of Science in Computer Science

Skills

Programming: Python, Java, Go, HTML/CSS, JavaScript, TypeScript, C/C++, Assembly, MATLAB, R
Frameworks: React, Redux, Bootstrap, Express, Node.js, PySpark, Apache Flink, Angular, Django, Flask, Spring Boot
Others: PostgreSQL, MySQL, Apache Hive, MongoDB, Git, Bitbucket, PowerBI, AWS, Machine Learning Models

Experience

Cybersecurity Researcher	09/2024 – 12/2024

Johnson & Johnson | Irvine, CA

- Led a team to identify patch bypass patterns in Windows 10 version 1809 using raw data detection and **unsupervised learning**, highlighting a 100-150 day vulnerability recurrence window.
- Utilized dynamic programming and cosine similarity metrics to improve clustering accuracy, enabling precise detection of bypass trends and actionable update recommendations.
- Implemented **Python** for exploratory data analysis and clustering with **pandas**, **scikit-learn**, and **NumPy**, achieving insights that optimized J&J's update strategy for improved security and cost efficiency.
- Collaborated with J&J stakeholders to translate findings into practical cybersecurity protocols, emphasizing base-level and class-level CWE risks for targeted mitigation.

Software Development Engineer Intern	06/2023 – 09/2023

Nathaniel Home Inc. | Rancho Cucamonga, CA

- Led the development of a comprehensive e-commerce platform using the **MERN** stack and integrating third-party **APIs** to deliver a feature-rich online shopping experience.
- Utilized **React** and **Redux** to create an intuitive user interface for buyers to explore store categories, products, and brands, as well as for sellers/merchants to manage brand components.
- Implemented server-side logic and routing with **Node.js** and **Express**, and used **Mongoose** schemas to model data and interact with **MongoDB**. Integrated **Redux Thunk** middleware to handle asynchronous actions and enhance overall performance.

Software Development Engineer Intern	06/2022 – 09/2022

Kemian Supply Chain Management Co. | GuangDong, China

- Employed **Pandas**, **Numpy** and **R** for data wrangling, ensuring data quality through missing value imputation, categorical variable encoding, and feature normalization.
- Experimented with **PyTorch** for deep learning models and **scikit-learn** for regression analyses, achieving a 6% improvement in sales forecast accuracy and enhancing inventory management by 5%
- Applied **k-means** and **hierarchical clustering** for effective customer segmentation, enabling targeted marketing strategies that increased engagement by 8%.

Front-end Developer Intern	11/2021 - 02/2022

UC Santa Cruz Chinese Alumni Association | Santa Cruz, CA

- Developed the official website for UC Santa Cruz Chinese Alumni Association for 400+ alumni to connect with each other. Used Angular framework and **HTML5**, **CSS**, **JavaScript**, and **TypeScript** to build the website, including the user login component, event list component, header component, footer component, etc.
- Utilized Postman for building and testing **APIs**, **Github** for project management, and **JIRA** as a project management tool to coordinate back-end debugging and fulfill **UX** requirements
- Designed the architecture of scalable and reusable UI components, leading to a 10% reduction in development time, accelerated the deployment of new features and improving maintainability of the website.

Projects

Distributed File Storage System	02/2023 – 03/2023

- Utilized **Golang** and **gRPC** to create a fault-tolerant, distributed, scalable cloud-based Dropbox-like file storage app.
- Utilized **consistent hashing** to scale the service and used **Raft consensus algorithm** for fault-tolerance.
- Enabled multiple clients for **CRUD** operations and concurrently connect to app to access a common shared set of files.