Baixi (Steven) Guo

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EDUCATION

University of California, San Diego **January 2025 – Expected Graduation June 2026**
Master of Data Science **Cumulative GPA: 4.00**

University of California, Merced **August 2019 - December 2023**
Bachelor of Science, Double Majors in Computer Science and Applied Mathematics **Cumulative GPA: 3.85**

SKILLS

Languages: Python, SQL, HTML/CSS, JavaScript; **Databases:** MySQL, PostgreSQL, Prometheus, Firestore
Technical Tools: React, Express, Vite, Firebase, Scikit-Learn, Tensorflow, Pandas, Numpy, Seaborn, Grafana

INTERNSHIP EXPERIENCE

Conectado, Inc. **Remote**
Backend Development Intern **January 2024 - May 2024**

- Spearheaded the Python web scraper automation, reducing script development time by 50%
- Implemented data deduplication and standardization, ensuring data integrity and reducing redundancy
- Collaborated with cross-functional teams to integrate applications and optimize the tech stack compatibility
- Deployed the scraper to the Google Cloud Function, achieving high availability and scalability
- Migrated MySQL data to Firestore data, restructured the schemas, and enabled a more flexible data model

PROJECT EXPERIENCE

Synthetic Monitoring System | *Prometheus, Grafana, Dashboard, Python, PromQL, Metric Monitoring, Network*

- Developed a Python-based PING parser to collect and generate synthetic monitoring metrics
- Automated a data pipeline integrating Prometheus for metric ingestion and time series database storage
- Built a custom Grafana dashboard with PromQL for real-time metric visualization

JSON Data Visualizer Web App | *React, Material UI, D3, Hierarchical Data Visualization, Web Hosting*

- Built and deployed an interactive JSON visualizer with TypeScript, React, Material UI, and D3.js on Vercel
- Implemented node hover for hierarchy level inspection, expand/collapse, and multiple layout options
- Styled Material UI components using CSS-in-JS to enable customization and elevate UI design aesthetics

Local-First Task Management Web App | *Web Socket, Express, Multi-user Real-time Update, Offline Persistence*

- Followed local-first principles and software engineering lifecycle from design prototyping in Figma, full-stack development using JavaScript, Express, and Vite, to deploying the application on Render
- Utilized Web Socket, Socket.io, and Y-Sweet database to provide real-time updates and cloud sync
- Integrated Dexie with IndexedDB to offer seamless access to offline functionalities during network outages
- Supported multi-user collaboration, enabled conflict resolution, and maintained eventual consistency through the cutting-edge technology - Conflict-free Replicated Data Types and Y.js

Capstone Project - Opportunity Management Web App | *React, Express, MySQL, API, Web Scraping, JavaScript*

- Developed an opportunity management platform to address the absence of a centralized database for students' opportunities, and showcasing skills in frontend (React), backend (JavaScript, Node, MySQL)
- Streamlined the process of data extraction from 10+ sources with web scraping techniques and data storage in MySQL, enabling consistent updates of opportunities
- Implemented API endpoints using Express, executing SQL queries for seamless data retrieval

Student Enrollment Web App | *Flask, SQLite, SQLAlchemy ORM, JavaScript, Role-based Access*

- Developed the web app using technology: HTML, CSS, JavaScript, Python, Flask, and SQLite
- Allowed students to view/register courses, professors to edit grades, and admins to edit all information
- Strengthened web application security by implementing salted hashing for sensitive data, preventing SQL injection through ORM usage, and a role-based access control system