

Baixi (Steven) Guo

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EDUCATION

University of California, San Diego

January 2025 – Expected Graduation June 2026

Master of Science, 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, TypeScript, Bash Script

Databases: MySQL, PostgreSQL, Prometheus, Firestore, IndexedDB, SQLite

Technical Tools: React, Express, Flask, Firebase, Scikit-Learn, Tensorflow, Pytorch, XGBoost, PySpark, Grafana

WORK/INTERNSHIP EXPERIENCE

Conectado, Inc.

Remote

Software Engineering Intern & Capstone Full Stack Developer

September 2023 - May 2024

- Automated **Python** web scraper (Beautiful Soup), reducing dev time by 50%; deployed via **Google Cloud**
- Migrated company data from **MySQL** to **Firestore**; implemented deduplication via fuzzy matching
- Developed a **full-stack** opportunity management platform (**React + Express + MySQL**); added search/filter/calendar/user profile UI and **REST API**, performed the API testing through **Postman**
- Streamlined crawling/scraping pipeline from 10+ sources; optimized updates and storage in **MySQL**
- Collaborated with **cross-team** (scraper/web/mobile/AI) to select **Firebase** as a unified backend

Lawrence Livermore National Laboratory, UC Merced

Merced, CA

Data Science Challenge Intern

May 2022 - June 2022

- Utilized **multi-layer perceptron** using **Python**, **Tensorflow**, and **Scikit-learn**, achieved 82% accuracy
- Performed hyperparameter tuning, leading to 2% optimization in running time and prediction accuracy

PROJECT EXPERIENCE

Ant vs. Bee Image Classification | *Python, PyTorch, Scikit-learn, Computer Vision, XGBoost, Image Processing*

- Utilized **XGBoost** to achieve accuracy of 82%, and boosted the accuracy by 1% through cross-validation
- Leveraged transfer learning with the **ResNet50** model to extract image embeddings using **PyTorch**
- Automated a pipeline to normalize and resize over 450 raw images using **Python**, **PyTorch**, and **Pandas**

Scalable Product Review Prediction | *Python, PySpark, Spark SQL, Spark MLlib, Word2Vec, Decision Tree*

- Leveraged a **PySpark** cluster to process 25GB+ of Amazon product review data
- Engineered 10+ features (aggregation, imputation, flattening, and encoding) using **Spark SQL**
- Utilize **Spark MLlib** to build a **decision tree regressor** model to predict product review scores

Course Registration Web App | *Python, Flask, SQLite, SQLAlchemy, JavaScript, Web Security*

- Implemented a **full-stack** course registration system using **JavaScript**, **Python**, **Flask**, **SQL**, and **SQLite**
- Developed **RESTful APIs** with **Flask**, enabling CRUD operations for students, professors, and admins
- Built role-based access control and prevented SQL injection(**SQLAlchemy** ORM)

Synthetic Monitoring System | *Python, Prometheus, Grafana, PromQL, Metric Collection, Observability*

- Built a **Python**-based ping parser to collect **real-time** synthetic network metrics and automate monitoring
- Integrated **Prometheus** for metric ingestion and built **Grafana** dashboards to visualize latency and uptime

Task Management Web App | *JavaScript, Express, Web Socket, IndexedDB, CRDT, Vite, Figma, Render*

- Developed the app in **full-stack** using **JavaScript**, **Express**, and **Vite**, and deployed it 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 access to **offline functionalities** during network outages
- Supported multi-user collaboration, enabled conflict resolution through **CRDT** and **Y.js**

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

- Built and deployed a 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