Veronica **Hangsan**

Software Engineering Intern

San Francisco, CA

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Education

University of California, Davis

Davis, CA

Bachelor of Science in Computer Science — *Sept. 2023 – Expected Jun. 2025*

Honors: Leonard Ross CAAA Endowed Scholarship; Shimomura-Quon Family Scholarship

Cornell University

Machine Learning Foundations Certificate, Break Through Tech AI — *Apr. 2024 – Expected Jun. 2025*

Skills: Exploratory Data Analysis, Dataset Building, Training Regression Models, Natural Language Modeling

Experience

American Express

Phoenix, AZ

Software Engineering Intern — *Jun. 2024 – Aug. 2024*

- Collaborated with the Data Management team for ten weeks to develop a machine learning metadata search assistant using **Python**, providing a centralized platform for metadata across different artifacts to reduce manual effort.
- Utilized **ElasticSearch** for data ingestion and trained **FastText** model to generate vector embeddings, storing it in the Elastic index for efficient semantic search, handling fuzzy string queries.
- Used **k-Nearest Neighbor** algorithm for accurate retrieval of relevant metadata based on vector similarity, improving from 80% to above 90% in similarity score for exact string matches after optimization.

American Express

Phoenix, AZ

Software Engineering Intern — *Jun. 2023 – Aug. 2023*

- Collaborated with the Digital Acquisition Intelligence team for ten weeks to develop and manage **Rest API** versioning within Go2 credit card applications, improving the experience of 50+ millions of users in the United States.
- Mapped V2 requests with the current system using **Java**, ensuring seamless compatibility and data consistency during request retrieval triggered through **Postman**.

American Express

San Francisco, CA

Software Engineering Intern — *Jan. 2023*

- Collaborated with the Financial Data Engineering team in a team of 3 for two weeks to develop an interactive data table with business data, implementing login functionality and data filtering using **JavaScript, HTML, and CSS.**
- Worked with **DBeaver**, performing data manipulation with **SQL** to retrieve records from a database, performing insertion and deletion.

Projects

Positive Book Review Predictor

Python — *Jul. 2024 – Aug. 2024*

- Trained and optimized **logistic regression, support vector classifier,** and **random forest** models for book review sentiment analysis.
- Achieved over 80% accuracy in identifying positive reviews by using **GridSearch** to find the optimal hyperparameter values for a given model.

Spotify Song Popularity

Python — *Apr. 2024 – Jun. 2024*

- Collaborated with a team of 5 students at **UC Davis** to develop ML models to predict song popularity based on stream count.
- Utilized **Pandas** for comprehensive data preprocessing, including cleaning, one-hot encoding, and normalization.
- Implemented train-test splitting, trained **random forest** and **gradient boosting** models, and assessed model performance using evaluation metrics.

Collision Detection and Alert System

Arduino — *Sept. 2023*

- Collaborated with a team of 3 students in the UC Davis AvenueE STEM Scholarship program to create a system that emits sound alerts when a collision risk is detected, enhancing road safety measures using **Arduino and C++**.
- Wired circuits to an ultrasonic sensor, passive buzzer, and red LED lights to enable sound alerts and sequential illumination when an object approaches the sensor.