Bert Joseph Prestoza

707-580-8680 | bertjosephprestoza@gmail.com | linkedin.com/in/bertjosephp | github.com/bertjosephp

Education

University of California, Davis — Davis, CA
Bachelor of Science in Computer Science, GPA: 3.94, With Honors — *Jun. 2024*

Relevant Coursework

- Data Structures & Algorithms
- Software Engineering
- Web Development
- iOS Development
- Programming Languages
- Machine Learning
- Deep Learning
- Computer Vision
- Computer Networks
- Operating Systems

Experience

Undergraduate Research Assistant — Oct. 2023 – Aug. 2024
Computational Communication Research Lab, UC Davis — *Davis, CA*

- Developed Python scripts to scrape public-facing data from 500k+ Hugging Face model landing pages, collecting metadata on model features, developer activity, user engagement, and compliance. Utilized the Hugging Face API to gather model cards and repository data, including files, commit history, and training resources.
- Automated the process of scanning and analyzing large sets of license files by writing scripts to parse extensive JSON outputs, extracting key licensing details such as text similarity percentages and SPDX license matches. Structured the results in CSV format for further analysis of open-source licensing trends.
- Performed data integrity checks on large datasets to ensure accuracy and consistency, contributing to a forthcoming research paper on AI model development and documentation practices in open-source ecosystems.

Projects

Tune In | *SwiftUI, Firebase, SpotifyAPI, MapKit*

- Engineered a social music discovery app utilizing SwiftUI and MapKit for location-based music sharing and exploration. Integrated Firebase for real-time data synchronization, user authentication, and media management, along with SpotifyAPI for music data retrieval.
- Implemented a map-based UI that displays nearby users and their current music tracks, using Geohashing for precise location filtering. Incorporated a mood analysis feature to evaluate audio features and show the collective mood of users in proximity.

Chirpr | *Node.js, Express, SQLite, Handlebars, JavaScript*

- Developed a microblogging platform featuring user authentication (Google OAuth 2.0), post creation, deletion, keyword-based search, and a like and comment system using Node.js, Express, and SQLite.
- Implemented profile photo management, emoji integration using Emoji API, and a dynamic user interface with customizable sorting options to enhance user interaction.

Facial Expression Recognition | *Python, PyTorch, OpenCV*

- Built a real-time facial expression recognition system that captures live video feed, detects and preprocesses face images, and classifies facial expressions using a trained CNN model. The system overlays bounding boxes and predicted emotions on detected faces in real time.
- Designed and trained a Convolutional Neural Network (CNN) on the FER-2013 dataset to recognize seven facial expressions, achieving ∼70% accuracy. The architecture included convolutional layers with batch normalization, max-pooling, and dropout for regularization.

Task Organizer App | *JavaScript, MongoDB Atlas, Express, React, Node.js*

- Developed a full-stack to-do list app with a React front-end, Express and Node.js back-end, and MongoDB Atlas database. Deployed as a static site on Render.
- Implemented comprehensive CRUD operations for task management, allowing users to create, read, update, and delete tasks, with features such as title, description, and due date.

Technical Skills

Languages: Python, C, C++, Swift, Java, HTML, CSS, JavaScript, SQL, R, Go, Lisp, Prolog, Bash
Frameworks/Libraries: SwiftUI, React, Node.js, Express, PyTorch, OpenCV, Tailwind CSS, Handlebars
Databases: Firebase, MongoDB, SQLite
Developer Tools: Git, GitHub, Unix/Linux