KONSING YUKMAN HAM LOPEZ

Computer Science Graduate with a Focus in Software Engineering

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Education

Bachelor of Science in Computer Science | University of California Davis, Davis CA, Aug. 2022 - June 2024 | *Total GPA: 3.63*
Associate of Science in Mathematics | Berkeley City College, Berkeley, August 2019 - May 2022 | *Total GPA: 3.97*

Technical Skills

Languages & Frameworks: C, C++, Python, Java, HTML/CSS, SQL/SQLite, PostgreSQL, Flask, Django, React, Node JS, C#
Cloud & DevOps & Tools: Google Cloud Platform, Docker, MongoDB, Git/GitHub, Bash/Shell scripting, AWS, Azure

Work Experience

UC Davis September 2023 to Current: **EcoCAR Electric Vehicle ©**

- Automated processes such as onboarding/offboarding members using Python, Apache Airflow, and Google APIs
- Developed interactive dashboards with Streamlit for real-time task management.
- Integrated Google OAuth2 and Gmail API for automated (secure) communications and event scheduling.
- Deployed solutions on Google Cloud Platform (GCP), receiving significant praise for enhancing various team's efficiency and productivity.

Software Projects

Blog Platform Development

- Developed a Node.js blog application (Yappin') with Express and Handlebars, using HTML, CSS, and JavaScript.
- Integrated Google OAuth for secure user authentication and utilized AJAX for dynamic content updates.
- Developed features like post creation, editing, deletion, sorting, upvote functionality, and utilized SQLite for storage.
- Production build was dockerized and hosted on AWS (S3, EC2, and RDS).

Artificial Neural Network Model with Website integration

- Developed and trained a TensorFlow and Python-based ANN to pinpoint heart disease risk indicators.
- Created an interface with HTML, CSS, and Flask for instant health risk assessments from user input.
- Achieved 82.95% accuracy in heart disease prediction through thorough testing and model refinement.
- Managed data collection, cleaning, and preprocessing from the largest heart disease dataset available for research purposes (5 heart datasets combined over 11 common features). Total: 1190 observations.

MS-FAT Variant Development (File System in C)

- Developed a file system in C with read/write operations, managing up to 128 files and 32 open file descriptors.
- Designed and managed a virtual disk using 4KB block-based storage, implemented a File Allocation Table (FAT) for tracking up to 65,535 data blocks, and created superblock and root directory structures.
- Ensured error handling and optimized performance, reduced disk access time and improved data integrity

Connect 4 AI Agents

- Utilized Minimax algorithm, Alpha-Beta pruning, and Monte Carlo for Connect4 AI Agents
- Developed a simulation script to evaluate AI performance across multiple games
- Utilized Pygame for game visualization and interaction, creating a robust simulation environment.

Shell Implementation

- Coded a shell in C with support for command execution, built-in commands (exit, cd, pwd), output redirection, and command piping. Added ls-like command (sls) for directory listing.
- Built a linked list to manage command arguments, exit values, and file descriptors. Executed built-in/forked processes

Languages

- English (Bilingual) | Spanish (Bilingual)