Konsing Yukman Ham Lopez

Computer Science Graduate | Software Engineer

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Education

Associate of Science in **Mathematics** | **Berkeley City College**, Aug 2019–May 2022 | *Total GPA: 3.97*

Bachelor of Science in **Computer Science** | **University of California Davis,** Aug. 2022–June 2024 | *Total GPA: 3.59*

Technical Skills

Languages: C++, Python, JavaScript. HTML/CSS, Java, C

Other: Flask, Django, React, Node.js, SQL/SQLite, Git/GitHub, Docker, AWS (RDS, Lightsail, S3), Google Cloud Platform

Experience

EcoCAR EV — Technical Lead

- Managed a team of 5 to automate processes for on/offboarding members using **Python, Apache Airflow, and Google APIs**
- 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. **Streamlit**, utilized for interactive dashboards with real-time task management

Software Projects

Blog Platform Full-stack 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 **SQL** for storage.
- Production build was **dockerized** and hosted on **AWS** (S3, Lightsail, and RDS).

Artificial Neural Network Model with Website integration

- Developed and trained a **TensorFlow** and Python-based **Artificial Neural Network** 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 4 KB 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)