




Leo Lee

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EDUCATION

University of Southern California

Master of Science in Computer Science - Data Science

Los Angeles, CA

August 2023 - May 2025

University of California, Santa Cruz

Bachelor of Science in Computer Science, GPA: 3.82

Honors: Cum Laude with Highest Honor in the Major.

Santa Cruz, CA

October 2020 - June 2023

EXPERIENCE

AMD (Advanced Micro Devices)

Software Engineer Intern: Internal Tools Team

San Jose, CA

May 2024 - August 2024

- Architected and developed a comprehensive dashboard using Python, Flask, MySQL, and Javascript, which enabled Product Verification and Test Engineers to monitor test pattern health and device performance over time.
- Optimized dashboard loading time from 13 seconds to 0.2 second by leveraging SQLAlchemy, Redis, and asynchronous data loading to streamline data queries and reduce response times.
- Utilized asynchronous tasks from Celery to implement customized notification system for streamlined management of alerts and providing important insights to assist the users with better decision making.

University of Southern California

Machine Learning Research Intern: FORTIS Lab

Los Angeles, CA

September 2023 - May 2024

- Conducted benchmarking on various state-of-the-art outlier detection algorithms to evaluate their performance on large textual documents by importing Python library PyOD.
- Utilized the Machine Learning library SkLearn to preprocess and label various datasets into a suitable format for analysis.
- Coordinated team workflow and completed a paper in IEEE format and presented it in front of live audience in class.

PROJECTS

PresidentTalksChess

- Built a chess broadcasting system that analyzes gameplay and delivers commentary as subtitles. Utilized cloned celebrity voices, computer vision, chess engine analysis, and advanced voice synthesis to create an engaging experience.
- Used Python and Ultralytics YOLO, fine-tuned on a custom dataset to detect all 12 chess piece classes and convert board states into FEN notation; integrated Stockfish to evaluate positions and generate tactical insights.
- Generated dynamic and expressive commentary using Edge-TTS for high-quality text-to-speech conversion, followed by RVC (Retrieval-based Voice Conversion) to accurately mimic celebrity voice profiles for enhanced realism.

Discord Bot

- Developed a Discord bot using Discord.py to automate job search processes into human readable embedded content
- Integrated Playwright web scraping library to extract latest job postings from Simplify's GitHub repository
- Implemented custom commands allowing users to efficiently query recent job updates and track their application statuses
- Designed and integrated an SQLite3 database system to store and manage job listings and user application data, enhancing data persistence and retrieval efficiency

Moodify

May 2024

- Collaborated with teammates to develop Moodify, a standalone web service that uses the Google Gemini Pro Vision API to identify the theme and mood of uploaded photos, then suggests the top 10 songs that match accordingly.
- Integrated the Spotify API to ensure a smooth and secure login experience, allowing users to access Spotify's extensive collection of daily updated playlists.
- Utilized Reflex, a pure Python web framework, to develop a responsive and user friendly frontend and backend.

SKILLS

Languages: Python, Swift, MySQL, PostgreSQL, JavaScript, TypeScript, C++, Kotlin, React Native, C, Bash, Java, Go

Tools: Playwright, BeautifulSoup, Swagger, JIRA, Confluence, RESTful api, Pylint, MyPy, Axios, Pandas, Numpy, Flask, Jinja2, Celery, MariaDB, Redis, ECharts, AJAX, jQuery, Agile, Docker, Express.js, Node.js, GIT, JUnit, matplotlib

Machine Learning: PyTorch, PyOD, OpenCV, Ultralytics YOLO, Scikit-learn, TensorFlow