Leo Lee

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EDUCATION

University of Southern California   Los Angeles, CA
Master of Science in Computer Science - Data Science   *August 2023 - May 2025*

University of California, Santa Cruz   Santa Cruz, CA
Bachelor of Science in Computer Science   *October 2020 - June 2023*
Honors: Cum Laude with Highest Honor in the Major.

EXPERIENCE

Software Engineer Intern   San Jose, CA
AMD (Advanced Micro Devices)   *May 2024 - August 2024*

- Developed dashboard using Python, Flask, MySQL, and JavaScript enabling engineers to monitor test pattern health and device performance
- Optimized dashboard loading time from 13 seconds to 0.2 seconds using SQLAlchemy and asynchronous data loading
- Utilized Alembic for automated database migration and maintained schema consistency across multiple environments
- Implemented Celery notification system for automated alerts and device performance insights
- Created interactive web pages using JavaScript for dynamic content updates, HTML for structured layouts, and CSS for responsive styling and visual enhancements

Machine Learning Research Intern   Los Angeles, CA
University of Southern California   *September 2023 - May 2024*

- Developed comprehensive benchmark platform for outlier detection algorithms using PyOD on large textual corpus datasets
- Implemented feature extraction pipeline using BERT and OpenAI GPT-3 embeddings for anomaly detection model evaluation
- Automated model comparison scripts across multiple outlier detection algorithms, analyzing performance metrics and generating comparative results
- Coordinated team workflow and presented IEEE format research paper to classmates

PROJECTS

Portfolio Manager — *Next.js, FastAPI, TypeScript, MongoDB, TailwindCSS*

- Developed a full-stack multimedia portfolio management application with drag-and-drop file uploads
- Utilized FFmpeg to generate video thumbnails and stored as encoded string in the database
- Built RESTful FastAPI backend with MongoDB using Motor async driver for data persistence
- Created responsive React frontend with Zustand state management featuring expandable sections
- Integrated Pydantic models for data validation and implemented secure file handling with size limits

MailWriter — *Next.js, PostgreSQL, Supabase, Shadcn*

- Developed Claude API powered email assistant that generates personalized emails matching user writing style
- Implemented Google OAuth authentication with NextAuth.js and Supabase for user management
- Created responsive UI using Tailwind CSS and shadcn/ui components
- Built React features for email collection, generation, and one-click copy functionality

Moodify — *Python, Reflex, TailwindCSS*

- Developed image to music web application that generates personalized music recommendations from uploaded photos
- Implemented Google Gemini Pro Vision API to analyze photo content and generate matching song suggestions
- Integrated Spotify API for user authentication and playlist access
- Utilized Reflex Python framework to build full-stack application with pure Python

SKILLS

Languages: Python, JavaScript/TypeScript, C/C++, Java, SQL
Frameworks: Next.js, React.js, Flask, HTML, FastAPI, Express, Node.js, Celery, Reflex, AJAX, jQuery, GraphQL
UI Libraries: CSS, TailwindCSS, MUI, Bootstrap, Shadcn
Databases: PostgreSQL, MySQL/MariaDB, MongoDB, Supabase, SQLite
Testing Tools: React Testing Library, Jest, Playwright, Pylint, MyPy, ESLint, Swagger, CI/CD
Other Tools: Git, Docker, Google Cloud Platform (GCP), Jupyter, Alembic, Agile, JIRA, Confluence, Make