

Lewis Whitehill

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EDUCATION

University of California, Santa Cruz | Computer Science B.S. | GPA: 3.88

June 2025

Coursework:

Web Applications | Data Structures & Algorithms | Parallel Programming | Database Systems | Computer Systems | Computer Architecture | Computer Systems Design | Data Visualization

SOFTWARE PROJECTS

AI Photobooth Node.js | Express.js | Multer | Amazon S3 | Google GenAI | SQL

- Built a backend image-processing pipeline where users upload images through Express routes backed by custom Multer middleware for file validation, MIME-type filtering, and size constraints.
- Integrated Amazon S3 for persistent photo storage, implementing upload and retrieval flows and generating storage keys for manipulation workflows.
- Developed an image transformation endpoint that retrieves an image from S3, sends it to Google GenAI for editing based on user prompts, and saves the transformed result back to cloud storage.
- Added REST API routes with centralized error handling to ensure consistent responses for Multer errors, invalid file types, and API failures.

Calendo Next.js | TypeScript | OpenAI API | Vercel

- Built an AI-assisted scheduling app that parses natural language and converts it into structured calendar events.
- Implemented a serverless backend (Vercel Functions) for parsing, Auth, and Google Calendar event creation, ensuring low-latency and scalable compute.
- Integrated OpenAI to extract event metadata (time ranges, locations, recurrence rules) from unstructured text.
- Deployed the application via Vercel's CI/CD pipeline and tested flows end-to-end with real OAuth tokens.

Recipe Manager Python | py4web | SQLite

- Designed a relational schema for recipes, ingredients, and user accounts, implementing migrations and seed data for consistent development environments.
- Built RESTful endpoints supporting CRUD operations with author-only edit/delete permissions
- Built secure user authentication and session management.
- Added validation and server-side checks to prevent unauthorized updates, ensuring integrity across shared recipe content.

SKILLS

Backend: Node.js, Express.js, REST APIs, OAuth, SQL

Cloud & AI: AWS S3, Vercel Functions, OpenAI API, Google GenAI

Languages: JavaScript, TypeScript, Python

Frontend: React, Next.js

EXPERIENCE

USDA Research Intern USDA | Albany, CA

2019

- Contributed to USDA Agricultural Research Service projects focused on enhancing the healthfulness and marketability of specialty crops.
- Improved product quality workflows and collaborated with researchers to optimize processing methods.