Julian Labbe

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Education

California Polytechnic State University, San Luis Obispo   San Luis Obispo, CA

Bachelor of Science Degree in Computer Science   *Expected May 2027*

GPA: 3.68 / 4.0, *President's List 2024 - 2025*

Coursework: Introduction to Software Engineering I - II, Mobile App Development, Introduction to Database Systems, Data Structures, Design and Analysis of Algorithms, Object Oriented Programming, Systems Programming

Skills

Programming Languages: Java, JavaScript, Kotlin, Python, C, CSS, SQL, Luau
Frameworks & Libraries: React, Express, Node.js, Mongoose
Software Tools: Git, Vercel, VS Code, Android Studio

Experience

Mobile App Developer Intern   Jan. 2025 - Aug. 2025

Frost Undergraduate Summer Research   *San Luis Obispo, CA*

- **Redesigned and developed an optimized method** to acquire, process and display data in a physics simulation app, leveraging **multiple threads** for improved performance
- Reduced the delay between audio streaming and render updates by **~50%**, compared to the app's previous version
- Built a virtual oscilloscope and audio spectrum analyzer in **Kotlin** on **Android Studio**, implementing a version of the Cooley-Tukey FFT algorithm to decompose and display the frequency components of incoming audio signals

Projects

Food Expiration Tracker, Web App   Jan. 2025 - June 2025

- Developed a **full-stack web application** in **JavaScript** to track the expiration date of foods in a user's fridge
- Built and styled the app's frontend architecture by creating reusable **React** components and applying custom **CSS**
- Integrated the **Unsplash API** to allow users to select representative images for their food items
- Prompted the **Groq API** to generate potential recipes using AI, prioritizing foods that expire the earliest
- Leveraged industry-standard project management solutions such as **Git** and followed an **Agile** workflow with teammates

"Scavenge Ore", Video Game   Apr. 2025 - Present

- Designed and developed the **entire software architecture** behind the game "Scavenge-Ore" on Roblox, achieving **top 7%** ranking in average player playtime **(35+ minutes)** across all games, demonstrating high user engagement
- Architected **50+ modular, reusable frontend components** that improved user engagement and retention
- **Strengthened backend security** by implementing a robust exploit detection system to mitigate the vulnerabilities posed by client-server data exchange
- Applied software architecture principles (modularity, data integrity, and concurrency) to enhance **maintainability**

julianlabbe.me, Personal Website   Feb. 2025 - Mar. 2025

- Implemented **RESTful API endpoints** in an **Express backend** to handle data flow between the frontend and backend
- Configured a **MongoDB database** to store form submissions, maintaining data integrity through schema validation
- Deployed the **full-stack web application** using **Vercel** and **Github Pages,** integrating a **CI/CD** workflow

"Impossible Word Unscrambler", Video Game   June 2024 - Oct. 2024

- Engineered the core logic behind the **frontend** and **backend** systems for the game "Impossible Word Unscrambler" on Roblox, achieving **top 5%** ranking in user monetization rate across all games and **2,600,000+ plays**