

Raymond House

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EDUCATION

University of California Irvine | B.S. in Computer Science | Specialization: Artificial Intelligence

- Irvine, CA (Graduating December 2025)

Relevant Coursework: Compiler Design, Design & Analysis of Algorithms, Computer Organization, Data Structures, Algorithms, Digital Security, Programming in Java, Programming in C++, Software Engineering, Software QA / Testing

EXPERIENCE

Software Development Researcher | UCI Gavin Herbert Eye Institute

2023 Jul — Present

- Developed a CNN-based Android app that identifies medication labels using object detection and text recognition with a team. Published on Google Play store with 50+ downloads, used by several medical facilities.
- Leveraged our machine-learning model using Java and Kotlin to display the expiration date of medicine bottles.
- Optimized expiry date algorithm by 40% and wrote methods to store / retrieve JSON data in internal storage.

Software Engineer Intern | NeuroLeap Corp.

2023 Sep — 2024 January

- Developed API endpoints in Go for emails transactions, user registration, and user information changes using Sendinblue, along with session token validation for secure web processes.
- Conducted testing of all APIs using Postman and Postgres + SQL to ensure reliable backend functionality.

Data Analyst | Field AI

2024 April — Present

- Assisted in training an AI-based autonomous vehicle using semantic segmentation, with LiDAR software.
- Pre-processed data and reviewed others' labeled data, keeping in mind the current performance of the model.

PROJECTS

Java Compiler *Java, Dot, DLX*

- Built an SSA based compiler from scratch in Java for a context-free grammar.
- Program visualizes the intermediate representation in GraphViz using Dot. Instructions in DLX (RISC architecture)

Student Group Finder *React, Prisma, PostgreSQL, GraphQL, Typescript*

- Developed a dashboard for authorized students at UC schools, using Google OAuth2, to find housing and clubs.
- Used Next.js, Prisma ORM to connect to PostgreSQL and migrate user data, queried with GraphQL. Front end hosted on Vercel, database on Supabase.

Biometrics Mobile App (MedHacks) *Flutter, Dart, Firebase*

- Developed a machine-learning based app using Flutter that identifies heart arrhythmias in a patient's pulse.
- Doctors and patients are authenticated using Google Cloud (firebase) and registered through a React/TS website.
- Pulse is calculated using camera-based PPG and ran via a model trained on an ECG dataset of 100,000+ patients.

Minecraft Plugin *Spigot API, Java, Maven, Gson*

- Developed laser guns using ray tracing techniques via Spigot API. Integrated new ItemAction system to manage custom item behaviors, utilizing persistent data storage to ensure actions are retained on server restart.
- Made region creation / saving commands. Region data(Json) is parsed on server start, and saved on shutdown. By command, the region can be rendered as a 3D box bordered with spawned particles in game.

TECHNICAL SKILLS

Languages: Java, Javascript, Typescript, C++, Python, Go, Kotlin, Dart, SQL

Software: JetBrains Suite, Android Studio, Google Cloud, Docker, Visual Studio Code, Postman, Postgres

Frameworks/Libraries: React, Prisma, JUnit, Vue, Flutter, Swing, ML Kit, Pandas, Sci-kit Learn, Selenium