

Ryan Alfa

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Summary

Driven Software Engineer with hands-on experience in backend development, API architecture, and full-stack mobile/web applications. Proficient in Python, C++, and React Native, with a proven ability to deliver scalable solutions and publish production-ready apps to Google Play and iOS platforms. Skilled in building secure, high-performance systems and passionate about solving real-world problems through clean, maintainable code in agile, team-based environments.

Skills

Programming Languages: Python, Java, C++, JavaScript, C, MIPS Assembly

Frameworks & Libraries: Django, React.js, React Native, Three.js, Tailwind CSS

Web & Mobile: HTML5, CSS3, REST APIs, JWT Authentication

Databases: MongoDB, SQLite

Tools & Platforms: Git, Docker, Linux, Jira, Visual Studio, Firebase, GitHub Actions

Soft Skills: Agile Development, Team Collaboration, Leadership, Communication, Project Management

Experience

Backend Engineer | ResearchAI

May 2025 – Present

- Building and maintaining backend APIs using Python and Django for research automation SaaS used by government and academic clients.
- Developing backend functionality for a new recommendation engine that processes and ranks analytical data for reporting.
- Collaborating in Agile sprints to deliver features with real-world impact, integrating APIs into existing research workflows.
- Writing clean, modular code and working closely with AI and R&D teams to align development with research needs.
- Strengthening skills in API design, data handling, deployment, and ethical AI integration.

Mobile App Developer | Chens Group

Aug 2024 – May 2025

- Developed a secure, scalable REST API using Django and MongoDB, supporting social features like profiles, activities, chats, and deals.
- Implemented JWT authentication with token blacklisting, account deactivation/reactivation, and admin privilege checks.
- Built user profile endpoints (update location, bio, interests) and activity workflows (create, join, leave, report, block).
- Engineered chat systems with one-on-one and group messaging, including rename, avatar update, and member management.
- Delivered full CRUD functionality for comments tied to posts, and developed secure deal management APIs for admins.
- Built robust moderation tools: block users/activities, view blocked items, and enforce platform policies.
- Organized backend into modular files (views.py, urls.py, mongodb.py) and authored complete API documentation.

STEM Tutor | Estrella Mountain Community College

May 2022 – May 2023

- Guided students in mastering programming concepts in Java, Python, and C++, leading to a 30% improvement in grades.
- Designed personalized learning plans to address individual student needs.
- Simplified complex technical topics using interactive teaching methods.

Manager | GNC

Aug 2019 – Jan 2022

- Achieved a 20% increase in sales by implementing strategic customer engagement techniques.
- Supervised a team of 8 employees, fostering collaboration and productivity.
- Optimized store operations, reducing losses and increasing efficiency.

Projects

Graph-Based Navigation System

Aug 2024 – Dec 2024

Tech: C++, GitHub Actions

- Developed a graph traversal engine with support for random walk, BFS, and DFS algorithms.
- Applied the Template Method Pattern to unify traversal logic while enabling extensibility.
- Wrote modular, test-driven code with automated CI using GitHub Actions for reliability.
- Enabled seamless traversal in both directed and undirected graph models.

Listalicious – Smart Grocery List Sharing App

May 2025 – Present

Tech: FastAPI, Python, MongoDB, React Native

- Building a full-stack app that lets users create and share grocery lists in real time.
- Developing the backend using FastAPI and MongoDB with RESTful API architecture.
- Planning secure user authentication, collaborative features, and mobile optimization.
- Designed with scalability and future AI-powered features in mind.

Education

Arizona State University, Tempe, AZ

Aug 2021 – Aug 2025

- Bachelor of Science in Computer Science