Luke Rangel

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EDUCATION

University of Southern California
Bachelor of Science, Computer Science
Relevant Courses: Data Structures and Object Oriented Design; Algorithms and Theory of Computing;
Full-Stack Web Development; Cross-Platform App Development; Software Engineering; Intro to Networking

Los Angeles, CA
Dec. 2025

Moorpark College
Associate of Science, Mathematics
Relevant Courses: Linear Algebra; Differential Equations; Programming Concepts and Methodology

Moorpark, CA
Dec. 2022

EXPERIENCE

Software Engineer
Herman Ostrow School of Dentistry of USC

July 2024 - Present
Los Angeles, CA

- Maintain codebase using Gitea, conducting code reviews and ensuring consistent coding
- Developed a kiosk check-in app using C# and TypeScript, integrating with Oracle for data retrieval, reducing patient wait times by up to **20%**.
- Established automated build and testing pipelines using JSLint and xUnit.
- Deployed and configured a self-hosted Gitea instance with an MSSQL backend, streamlining version control.

IT Support
Herman Ostrow School of Dentistry of USC

Jan. 2024 - Present
Los Angeles, CA

- Administered user permissions through Azure and manage virtual desktop infrastructure using Citrix.
- Triaged and prioritized **20+** daily support requests to address hardware, software, and network issues.
- Created and maintained technical documentation on configuration, incident resolution, and best practices.

PROJECTS

NightGuard | *Android Studio, Java, Mapbox API, MongoDB, Node.js, Express, Firebase*

- Developed an Android app that tracks light pollution, enabling **50+** users to submit reports monthly.
- Integrated Mapbox API for interactive, location-based reporting and MongoDB for cloud data storage.
- Designed a RESTful API with Node.js to send and recieve data between the app and MongoDB.

Latte | *React, Node.js, Supabase, Vite, Tailwind, TypeScript*

- Collaborated with four developers and an external stakeholder to create an app for local businesses to sign up and create dedicated pages to advertise themselves.
- Developed a responsive front end in React using Vite and Tailwind CSS for mobile friendly design.
- Built a RESTful API with Node.js that integrates with Supabase for authentication and data storage.

Tree Hole | *Android Studio, Java, Firebase*

- Collaborated with a team of three developers to create a social platform tailored towards USC students.
- Designed and implemented a real-time feed, facilitating **100+** posts/comments monthly.
- Leveraged Firebase database/storage for secure backend storage and data integrity.

DASH Proxy Server | *C++, Python, Sockets, Mininet*

- Designed a proxy that adapts video bit-rate using an EMWA-based algorithm.
- Processed and logged throughput for **50** concurrent client sessions for real-time video analysis.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL, JavaScript/TypeScript, HTML/CSS, C#
Frameworks: React, Node.js, Bootstrap, Flutter, .NET
Developer Tools: Git, Docker, Linux, Firebase, Android Studio, Mininet, Supabase
Libraries: PyTorch, BeautifulSoup, SDL2, OpenGL, NumPy