Julian Ranieri

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Summary

Software developer and systems-oriented engineer focused on diagnosing performance, security, and scalability issues and delivering durable solutions. Experienced across backend systems, real-time communication, Infrastructure, and frontend applications. Strong judgment in balancing user experience, system constraints, and long-term maintainability.

Technical Skills

Languages: JavaScript, TypeScript, Python, Go, C, C++
Frameworks & Libraries: React, React Native, Node.js, SwiftUI, TKinter, Django
Systems: WebSockets, WebRTC, Docker,, systemd
Databases: PostgreSQL, Redis, SQL
Cloud & Infrastructure: AWS, GCP, Cloudflare, Terraform

Professional Experience

Private Client — Software Developer / Consultant (2024–2025)
Automated manual OCR and image-review workflows by designing GUI and CLI tools in Python and C++. Implemented batch image processing, text extraction, bounding-box analysis, and CSV reporting, reducing review time and error rates. Packaged and distributed the solution as a standalone Windows executable using PyInstaller.

Scaling Startups — Web Developer / Project Manager (2023–2024)
Identified systemic performance and stability issues across a production platform and led targeted optimizations. Reduced high-traffic query response times by up to 3× through database cleanup and query restructuring. Mitigated security vulnerabilities, resolved memory leaks, and responded to a live brute-force database attack. Evaluated infrastructure migration paths from Heroku to AWS using Terraform and Docker to reduce costs and improve reliability.

PolkaDot Sky Software — Web & Mobile Developer (2021–2022)
Developed React Native applications with offline-mode support for network-constrained environments. Automated mobile deployment pipelines and integrated geolocation and NFC-based asset tracking. Worked with sensitive PHI data in an Elixir web service supporting COVID testing operations.

Audiopile — Mobile, Web & Infrastructure Developer (2020–2024)
Improved platform security and reliability by migrating all services from HTTP to HTTPS and enforcing Cloudflare-only ingress. Automated DNS, SSL, and infrastructure changes with Terraform, achieving full encryption with minimal downtime. Developed React and React Native UI components and expanded backend functionality via Python-based API services.

Additional Relevant Projects

Far Reach Co. — Co-Founder / Web Developer (2023–2025)Designed and built a real-time virtual tabletop platform for role-playing games. Implemented custom SPA
frameworks, WebSocket services, and Node.js backends with PostgreSQL and Redis. Integrated AWS S3 and CloudFront for scalable asset delivery.

Parch — Backend Developer / Systems Architect (2025)
Designed a decentralized desktop chat system to reduce reliance on centralized servers, improving privacy and fault tolerance. Built a real-time messaging protocol over raw WebSockets with channel isolation, role-based access, and message persistence. Integrated WebRTC voice using a self-hosted SFU with TURN-based NAT traversal and TLS-secured relay infrastructure. Delivered cross-platform desktop clients using Wails for Windows and macOS.

Tape Sim — Audio Software Developer (2024)
Built a macOS audio application to simulate analog tape workflows. Implemented low-level audio recording and playback in C using PortAudio at 48kHz / 24-bit. Designed an intuitive SwiftUI interface for transport control and stereo bounce.