

## Julian Ranieri

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## Language & Tooling Proficiencies

### Languages

- JavaScript/TypeScript
- HTML + CSS
- C/C++
- Python
- OCaml
- Swift

### Tooling & Frameworks

- React & React Native
  - Flask & Django
  - Tkinter
  - Tesseract
  - PortAudio
  - SwiftUI
  - Terraform
  - Docker
  - AWS (S3, CloudFront)
  - Redis
  - PostgreSQL
  - Google Cloud
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## About

I am an independent contractor from the SF Bay Area. As a developer, I am thorough in **problem-solving**, delivering reputable, well-documented, and secure solutions for my clients. As a consultant, I evaluate **cost-benefit analyses** for environment-specific challenges, providing high-quality advice to create **maintainable** and **successful products**.

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## Recent Experience

## Private Client

**Role:** Software Developer, Consultant

- Designed and developed multiple **Python** applications with both **Tkinter GUI** and **CLI** to automate **OCR** and **image processing** using **Tesseract** and **PIL**.
- Built functionality to process image directories, extract text, generate **sub-images**, and create detailed **CSV reports** with bounding boxes and dictionary comparison results.
- Implemented a **page generator** to compile sub-images into ransom-note style pages with customizable settings for layout, padding, and word indexing.
- Packaged the application into a standalone executable for **Windows** using **PyInstaller**, enabling easy distribution and cross-platform compatibility.
- Developed a **user-friendly settings interface** for configuring parameters like **Tesseract language**, CSV delimiters, and sub-image dimensions, supporting flexible user workflows.

## Tape Sim

**Role:** Software Developer

- Developed Tape Sim, a desktop application for macOS designed to simulate the experience of using a traditional tape machine for recording and playback of audio tracks.
- Implemented core audio processing logic using **C** and the **PortAudio** library to record and play audio at 48kHz, 24-bit mono quality.
- Designed the user interface using **SwiftUI** for macOS (**Intel x86\_64 architecture**), providing intuitive controls for recording, rewinding, fast-forwarding, and stereo bounce features.
- Enabled **multi-track audio recording** with support for as many tracks as there are inputs in the user's default audio device, saving each recording as **.wav** files to a specified directory.

## Peakery (Scaling Startups)

**Role:** Web Developer, Project Manager, Consultant | *Peakery via Scaling Startups*

- Managed development tasks and led significant **performance optimizations** across the platform, reducing **response times** and improving **stability** for both web and mobile applications.
- Reduced **database size** by cleaning up unused tables and optimizing **query performance**, cutting load times by up to 3x on key pages.
- Addressed **server stability** by mitigating vulnerabilities, fixing memory leaks, and handling a **brute-force attack** on the database.
- Evaluated **infrastructure migration** options to lower operational costs and set up a stable **local development environment** using Docker.

## Audiopile

**Role:** Mobile and Web Developer, Infrastructure | *Audiopile*

- Developed **UI elements** and **API calls** for **React** and **React Native** components.
- Built **CRUD endpoints** in a **Python** web service to enhance functionality.
- Modified **Google Cloud infrastructure** using **Terraform**, migrating the entire stack from **HTTP to HTTPS**, automating **DNS management** with **Cloudflare**, and enabling full **SSL encryption** from Cloudflare to GCP. Limited inbound IPs to Cloudflare outbound IPs and successfully rolled out these changes with minimal downtime, significantly improving **performance**, **security**, and **scalability**.

## Far Reach Co.

**Role:** Web Developer, Co-Founder

- Developed an **online, real-time virtual tabletop** for role-playing games.
- Designed and implemented **custom JavaScript SPA frameworks** for various client-side applications.
- Created **CRUD** and **websocket services** using **Node.js** and **TypeScript**.
- Built **database models** and services with **PostgreSQL** and **Redis**.
- Integrated **AWS S3** and **CloudFront** for image asset storage and retrieval.

## PolkaDot Sky Software

**Role:** Web and Mobile Developer | *PolkaDot Sky Software*

- Automated **iOS/Android deployment systems**.
- Designed and implemented **UI elements** and **API calls** for **React Native** components.
- Processed sensitive **PHI user data** for COVID testing in an **Elixir** web service.
- Developed **offline-mode capabilities** in a React Native application for a network-dependent system.
- Integrated **geolocation functionality** to manage physical assets.