

Alexander Herlan

Senior Software Engineer
DevOps & IT Manager

Overview

Alexander Herlan

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I am a passionate technophile with over 27 years of hands-on experience in software engineering, web design, database engineering, IT management, computer repair, and user experience design. My primary skills revolve around full-stack Python and Javascript development, with a focus on web application development.

Throughout my career I have constantly honed and expanded my skills with freelance work and side projects to stay up to date on the latest technologies. Lately this has brought me into the world of DevOps, Docker, Kubernetes, and advanced resource management across many systems, and also to begin to explore building Web3, Machine Learning and AI technologies into my work. I hope to take this unique perspective on software engineering into the future and help build the Web3 world of tomorrow that is slowly taking shape around us. My goal—and dream—is to apply my skills in a growth-oriented technology company that shares my enthusiasm and belief that the next big idea is always right around the corner.

Experience

Independent Software Developer / Freelancer

JUNE 2024 – PRESENT

I develop web and mobile applications for long-term clients sourced through Upwork, agency partnerships, and professional referrals. Working directly with clients and distributed teams, I turn early-stage ideas and complex business requirements into production-ready software. I own projects from discovery and architecture through implementation, cloud deployment, feedback cycles, and ongoing support. Recent work spans membership management, AI-powered safety systems, and financial technology.

Selected Projects

IIPM.ie

APRIL 2025 – MARCH 2026

- Developed a membership platform for the Irish Institute of Pensions Management through an Upwork engagement, collaborating with an Australia-based agency and Daniel Steven.
- Expanded an initial set of WordPress landing pages into a larger PHP and PostgreSQL platform supporting individual and organisational membership applications, qualification requirements, annual payments, monthly course-progress reviews, and downloadable PDF certificates.

- Built an administrative portal with statistical dashboards for membership, onboarding, qualifications, payments, and course progress. Automated programme-timeline calculations, approved-leave handling, certificate issuance, and several previously manual documentation workflows.

Technologies: WordPress, PHP, PostgreSQL

SafeSchoolz

JUNE 2024 – JUNE 2025

- Worked with David Gray, VP of Grays Communications in Los Angeles, to develop a safety platform that detects firearms and communicates potential incidents to first responders.
- Built the Media Pipe and Aegis Android applications and integrated them with the existing .NET-based HeroEyez portal. Media Pipe detects firearms in device or IP-camera feeds; Aegis receives alerts with screenshots and a one-minute evidence clip, initiates a Twilio-powered call workflow, and forwards incident information to HeroEyez for monitoring and response coordination.
- Evaluated YOLO before adopting TensorFlow Lite to improve object-detection accuracy within mobile hardware constraints. Trained and tested the model using more than 10,000 firearm images from Roboflow and custom-captured samples.
- Completed the end-to-end alert workflow and deployed the application in June 2025. Broader commercial rollout was later paused because of market and regulatory constraints.

Technologies: Android, Java, Kotlin, object detection, TensorFlow Lite

Source code: [Media Pipe](#) · [Aegis](#)

Equity Funding Source

APRIL 2026 – JULY 2026

- Built a mortgage-lending platform for a Los Angeles-based mortgage-loan broker, using Preact for a lightweight frontend and Bun for the backend.
- Analyzed United States mortgage and private-lending workflows, including the forms and information exchanged throughout the loan process, to support borrower applications, lender collaboration, administrative oversight, and secure document handling.
- Deployed the platform on Cloudflare using Workers for server-side execution, D1 for relational data, Durable Objects for real-time messaging, and R2 for document storage. Used AI-assisted development with Codex to accelerate implementation and iteration while maintaining system stability.

Technologies: Preact, Bun, Cloudflare Workers, Cloudflare D1, Durable Objects, Cloudflare R2

Covius, LLC — Senior Software Engineer

JANUARY 2022 – APRIL 2024 · POMPAN0 BEACH, FL

At Covius, a nationwide real estate technology and holdings company, I worked on the Senior Software Engineer's team of their RealtyBid.com unit, and helped bring a full redesign of the frontend and backend systems to reality. This real time, online, Real Estate Auction platform includes a modern REST API backend, modern responsive javascript powered front end, and many asynchronous feedback mechanisms, providing user's real time feedback about the current states of ongoing auctions. I was also responsible for building backend tools for the internal teams to use, so they can effectively administer the website and provide customer support with ease.

Accomplishments

- Participated in the complete redesign of a major legacy website, with tons of historical and legacy data
- Helped manage and adapt a legacy database to a modern design
- Created a responsive web application front end that functions just as well in a Desktop web browser as it does on a Phone
- Refined the user experience with QA testers and business partners over many sprints and testing sessions utilizing effective communication
- Utilized a modern technology stack including RxJS and Angular to keep the website ready for tomorrow

SEAD Software — Software Engineer

APRIL 2021 – JULY 2022 · DELRAY BEACH, FL

At SEAD Software I employ python and web development skills to design web applications and deliver business analytics for the healthcare industry and legal field. I also enriched company wide development operations by employing Azure DevOps and development pipelines to streamline team coordination.

Accomplishments

- Designed and implemented python code using Google's cloud based AI Computer Vision API to recognize and digitally categorize physical laboratory documents.
- Developed text messaging web application to autonomously communicate and respond to customer interactions and generate leads for law firms using the Twilio API.
- Maintained and implemented Amazon Web Services infrastructure to support multiple projects
- Implemented and trained staff on Microsoft Azure DevOps development platform infrastructure
- Maintained a large GIT code repository for multiple clients

Clarity Diagnostics & Lab Solutions — Director of IT

SEPTEMBER 2020 – JANUARY 2022 · BOCA RATON, FL

Managed all IT needs and decision making for a boutique medical testing Laboratory and their Diagnostics test manufacturing business. Here I helped expand the company from its small sized roots to doing

business with multiple outside entities across the country, including many local and state governments. I also managed software quality control, deployment and training for the company's sister company SEAD Software.

Accomplishments

- Implemented physical keycard/badge access security system for the entire laboratory facility
- Implemented and maintained security standards for email and cloud based applications in Google Workspace and Microsoft 365
- Maintained client facing websites
- Expanded laboratory infrastructure and assisted in the QAing of medical testing equipment
- Managed and instructed other IT staff in their daily responsibilities

MyTap, aka Which Craft — Lead Developer

JANUARY 2016 – APRIL 2020 · ALBUQUERQUE, NM

At this small start up I worked in collaboration with a team of designers to create a craft beer recommendation engine that was based on web scraping and natural language processing of online beer reviews. This is where I got my first taste of what was to come with the power of Machine Learning and AI.

Accomplishments

- Implemented a robust web scraper in Python using the Scrapy python library
- Created a responsive web application front end that functioned as a browser based phone application
- Designed custom natural language processing code in python to create craft beer flavor profiles based on adjective frequency in craft beer review text.
- Maintained a Django based web server backend to serve data from a PostgreSQL database backend

TriCore Reference Laboratories — Production Support Specialist

APRIL 2013 – JANUARY 2017 · ALBUQUERQUE, NM

I worked as a technology specialist in the medical field, assisting multiple regional hospital staff with their daily technology needs, in the fast paced industry of health care. I would help with everything from urgent patient critical password resets, to troubleshooting of industry specific vertical applications like SunQuest, assisting in the retrieval of patient medical records and diagnostic information, while monitoring for performance and errors.

Accomplishments

- Being responsible on the nightshift for the entire company production environment. Usually supported by 60 staff during the day, I was solely responsible for monitoring, troubleshooting, and escalating issues to the appropriate parties at night.

- Proficient in multiple industry specific vertical applications, monitoring the transmission of patient records between multiple hospital's varied medical record systems.
- Walked medical staff through time sensitive, patient critical, IT related troubleshooting.
- Monitored critical hospital infrastructure for performance and errors, correcting them promptly.
- Trained new help desk employees on their daily tasks and responsibilities
- Remained on-call off hours for emergency assistance.

Skills

Programming Languages

Python (including Flask and Django frameworks), Go, PHP, NodeJS, C and C++, JavaScript (including jQuery and AngularJS), TypeScript, CoffeeScript, HTML5, CSS3, SASS

Database Technologies

- **SQL:** Microsoft SQL Server, MySQL Server, PostgreSQL Server
- **NoSQL:** MongoDB, CouchDB, Redis
- **Other:** Microsoft Access, Microsoft Excel

Applications

- **Programming:** Microsoft Visual Studio, Visual Studio Code, PyCharm, Sublime Text 3, Devart dbForge, Microsoft SQL Studio, VIM, Eclipse, GIT
- **Design:** Adobe Photoshop, Adobe Dreamweaver, Adobe Illustrator, Adobe Edge, Adobe InDesign
- **Productivity:** Microsoft Office, Google Docs (Drive), WordPerfect Suite
- **Virtualization:** VMWare, VirtualBox, Docker, Kubernetes

Cloud Technologies

- Microsoft 365 and Google Workspace Administration
- Amazon Web Services Administration
- Microsoft Azure DevOps Administration

Other

- Jira Agile Project Management skills
- Responsive Web design
- Advanced (and remote) Linux administration
- Search Engine Optimization for Google and Bing search engines
- Social media presence implementation (Facebook, Twitter, Instagram, etc.)

Education

University of New Mexico

Certifications

- Beginning Programming in C++
- Intermediate Programming in C++
- Advanced Visual C++
- Beginning Visual Basic
- Intermediate Visual Basic

Central New Mexico Community College (aka TVI)

- Beginning Photoshop
- Intermediate Photoshop
- Advanced Photoshop
- Introduction to Lightwave 3D

References

David Foy — Senior Software Engineer — Covius: [407-954-1245](tel:407-954-1245)

Warren Wright — CEO — SEAD Software: [201-988-1513](tel:201-988-1513)

Ashley Park — Director — Clarity Diagnostics: [508-341-5387](tel:508-341-5387)

Douglas Radecki — CEO — MyTap / Which Craft: [505-400-4636](tel:505-400-4636)