JONATHAN OLSON

Sacramento, CA | 916-770-6019 | jonnycoder@gmail.com | www.jon-olson.com | linkedin.com/in/jwolson1

SUMMARY

Senior software engineer with robust experience in backend, front-end and embedded software across several domains.
5 years as a tech lead in graphics test automation, sales & marketing, and embedded consumer electronics.
2 years releasing stable product features to millions of IoT devices.
Recent focus on machine learning specialization training and integrating LLMs to solve unique problems.

SKILLS

Programming Languages: Python, C++, C#, JavaScript, TypeScript

Frontend Development: Django, FastAPI, Node.js, CSS, Tailwind CSS, SvelteKit, Angular, ExpressJS

Systems: Docker, Concurrent Programming, Inter-process Communication, Bash/Shell, Embedded Debugging

Databases: PostgreSQL, SQL Server, T-SQL, MongoDB, RIAK, Redis, Vector Stores

Cloud: AWS IoT, AWS MediaLive, AWS S3, YouTube API, Meta API, OAuth 2.0, Web Sockets, RTMP, Web Crawling

Other: Event Sourcing, RabbitMQ, Celery, TDD, Test Automation, RESTful API, SonarQube

LLM Integration Skills: OpenAI, Cohere, LlamaIndex, Vector Embedding Strategies

EXPERIENCE

SELF-EMPLOYED

Contract Senior Software Engineer - May 2023 to Current - Remote

- Design, develop, troubleshoot, and maintain LLM full-stack applications using Python frameworks including FastAPI, OpenAI, Cohere, and vector data stores. Researched and applied advanced retrieval augmented generation (RAG) techniques, prompt techniques, and embedding models for high accuracy to keep costs low.
- Sole developer of new copyright workflow protecting customer's live streams on YouTube and Facebook. Utilized Netflix Conductor, Python and AWS to automate live stream and copyright claim creation.
- Developed data ingestion pipeline that continuously crawls social media sites for copyrighted content, streamed results to RabbitMQ, and correlate with customer content using Django and PostgreSQL. Created Netflix Conductor workflows that utilized Apify web crawlers and Python workers for real-time processing, and deployed continuously using GitOps, AWS, Docker and Kubernetes.

VIZIO

Principal Software Engineer - August 2022 to January 2023 - Remote

- Designed, developed, and led new terms & conditions integration, legally required for VIZIO Account program. Synchronized new and millions of existing user responses with OneTrust cloud and AWS IoT Core.
- Reverse engineered Kotlin Native Linux ARM32 build target to upgrade compiler to ARMv8 due to a bug impacting the chipset of VIZIO's flagship model.

Team Lead Senior Software Engineer - March 2020 to August 2022 - Remote

- Team Lead for a Python Django API running on millions of connected TVs. Developed and supported multiple features between the API and firmware using C++ dynamic libraries and reactive event-based callback programming. Examples include IPC, System Registry, Bluetooth, IoT Device Shadow, and Voice transcription.
- Lead and developed TV account linking, with mobile and firmware teams, for VIZIO Account subscription and transaction video on demand revenue streams with customers such as Disney+ and Starz. Used AWS IoT and IPC to integrate between TV API, TV firmware, mobile, and cloud.

- Built the Sentry logging and tracing capability for SmartCast API on-device and proactively held weekly meetings to triage and address errors to stay under logging quota for millions of TVs.
- Developed voice command processing on the TV and interfacing with SoundHound using websockets. Enhanced low level integration, using named pipes, to enable soft-mic functionality with YouTube app.
- Extensive cross functional collaboration to bring new features from PRD to production. Worked closely with upper management to deploy binary and configuration updates to millions of TVs quarterly.

Senior Software Engineer Contract - June 2019 to March 2020 - Remote

- Designed and developed Bluetooth API, using Python and Python C/C++ extensions, for VIZIO's first voice remote control for all TVs shipped after 2020. Worked closely with firmware and UI engineers to debug multithreaded deadlock bugs with dynamic library callbacks prior to release, making the pairing process rock-solid for end users.
- Developed CI/CD test automation using Docker to test 500+ TV settings endpoints for every pull request in a Python Django API codebase that runs on all VIZIO TVs.

INTEL

Senior Software Engineer Team Lead - September 2018 to June 2019 - Folsom, CA

- End-of-life'd a legacy app of 125,000 lines of code by developing a backend process to handle commission payments for Intel sales employees. Worked directly with Sales & Marketing customers to use forecasted revenue to reduce negative swings in employee pay.

Senior Software Engineer - April 2017 to September 2018 - Folsom, CA

- Developed new API microservices powering backend security entitlements to confidential technical documents at developer.intel.com using Node.js, TypeScript, Express.js and MongoDB.
- Built CI/CD process from scratch using Docker, Kubernetes, Linux, API test automation, and one-click deployment to the cloud and AWS. Implemented best practices from continuous delivery maturity model such as Docker IaC, blue-green deployments, nightly releases, mainline development, and security scanning with code analysis using SonarQube.
- Mentored partner teams by automating deployments for Adobe AEM, the CMS that powered Intel.com. Reduced deployment times from 3 hours to 30 minutes.

Senior Software Engineer Team Lead - August 2015 to April 2017 - Folsom, CA

- Partnered with internal customers to build a dashboard and email that delivered immediate results to graphics driver engineers about their pre-check-in code. It was the first unified test results tool for all graphics driver code changes prior to CI testing, reporting on 60% of all automated test volume.
- Lead team of three for developing and supporting dashboard and test results aggregation of 1000+ test-devices in two data centers. Provided near real-time data analysis using Python, RabbitMQ, Redis and RIAK NoSQL.

Software Engineer - October 2013 to August 2015 - Folsom, CA

- Grew as a software engineer by supporting a legacy .NET test automation framework and transitioning into leading and developing internal open-source apps and backend tools using Linux, Python, RabbitMQ, RIAK and Docker.

EDUCATION & CERTIFICATES

Bachelor of Science, Computer Science - California State University, Chico
Supervised Machine Learning: Regression and Classification - DeepLearning.AI Coursera Stanford Online
Computer Science Award (C++) Best in Graduating Class - Amador Valley High School, Pleasanton, CA