

JONATHAN OLSON

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SUMMARY

Principal/Senior software engineer with high impact experience in backend, embedded and UI across many domains.

5 years as a tech lead in embedded, test automation and sales & marketing.

2 years of experience leading and releasing embedded product features to millions of consumer 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, SvelteKit, Angular, ExpressJS

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

Databases: PostgreSQL, SQL Server, MongoDB, RIAK, Redis

Cloud: AWS IoT, OAuth 2.0, Web Sockets, RTMP, Web Crawling

Other: RabbitMQ, Celery, TDD, Test Automation, RESTful API Design, SonarQube

LLM Integration: OpenAI, Cohere, ChromaDB, Vector Embedding Strategies

EXPERIENCE

Contractor - Senior Software Engineer - May 2023 to Current - Remote

- Took extended leave to care for a child born three months early (27 weeks) with special medical needs.
- Managed software development projects for a client in the copyright protection space. Developed new copyright automation workflow to protect live streams on YouTube and Facebook using Netflix Conductor, Python and AWS. Developed data ingestion pipelines that continuously crawls social media sites for copyrighted content, streamed results to RabbitMQ, and correlate with customer content using Django and PostgreSQL.
- Consulted with a startup founder on LLM integration, advanced retrieval augmented generation (RAG) techniques, prompt techniques, and embedding models. Developed a Resume AI at www.jon-olson.com.

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 build system to upgrade compiler from ARMv6 to ARMv8 due to a bug impacting the chipset of VIZIO's flagship model.

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

- Team Lead for a Python Django API running on tens of millions of connected TVs. Led most new feature development 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.
- 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 firmware and cloud service providers using websockets. Made enhancements to enable soft-mic functionality for the YouTube app on VIZIO TVs.
- 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.

VIZIO - Senior Software Engineer Contractor - June 2019 to March 2020 - Remote

- Designed and developed bluetooth pairing, using Python and C++, for VIZIO's first voice remote for all TVs shipped after 2020. Worked cross functionally to resolve multithreaded bugs prior to launch, ensuring the pairing process was rock-solid for end users.
- Developed CI/CD test automation using Docker, to test 500+ TV endpoints for every pull request, for a Python Django API codebase that runs on all VIZIO TVs.

intel - Senior Software Engineer - October 2013 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.
- Developed new API microservices powering backend security entitlements to confidential technical documents at developer.intel.com. Utilized 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 infrastructure-as-code, blue-green deployments, nightly releases, mainline development, and security scanning with code analysis using SonarQube.
- Mentored other teams to automate deployments for Adobe AEM, the system that powered Intel.com. Reduced deployment times from 3 hours to 30 minutes.
- 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.
- 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 and Python.

intel - Software Engineer - June 2005 to October 2013 - Folsom, CA

- Communicated effectively with IT partners and customers across the world in Malaysia, Costa Rica, Israel, UK and India to support critical Intel applications for all HR functions including employee pay and learning. Earned six division recognition awards for execution and customer satisfaction.
- Developed several new C# ASP.NET applications such as Air Shuttle, Paystub, Redeployment and Great Place to Work. Wrote and supported custom ETL jobs and supported and tuned poorly performing vendor SQL code.

EDUCATION & CERTIFICATES

Bachelor of Science, Computer Science - California State University, Chico

Supervised Machine Learning: Regression and Classification - DeepLearning.AI Coursera Stanford Online

C++ Computer Science Award Best in Graduating Class - Amador Valley High School, Pleasanton, CA