

Andy Valencia

Full-stack Development | AI-Driven Development | Product & Platform Focus

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SUMMARY

Product-focused Senior Software Engineer with 10 years of experience building and scaling successful startup products and **mission-critical platforms across AI, autonomous systems, and developer tooling**. Strong background in **AI-driven software development**, including **LLM integration** and operationalizing models in production systems. Experienced in **multi-platform, full-stack application development** across web, mobile, and real-time systems, with hands-on contributions using **React, Next.js, TypeScript, Node.js, Python, and Go**. Proven expertise in cloud infrastructure management on **AWS** and **GCP**, delivering scalable, secure, and cost-efficient systems in fast-moving and regulated production environments.

EDUCATION

 **Master's Degree in Computer Science**
Columbia University
📅 2014 - 2015

 **Bachelor's Degree in Computer Science**
Columbia University
📅 2010 - 2014

EXPERIENCE

 **Senior Software Engineer**
PolyAI

📅 10/2022 - Present 📍 New York, United States

Built a voice agent platform for enterprises to design, deploy, and monitor human-like AI voice agents across regulated industries. Led development of the AI Voice Agent Design Studio and observability tooling to support flexible agent design and production monitoring.

- Maintained and enhanced the frontend application using **React, Next.js, TypeScript, TailwindCSS**, and **ShadCN** to provide a seamless interface for managing voice agents and resources.
- Designed and implemented a modernized voice agent studio for agent behavior design and simulation, leveraging **React-Flow** to improve usability and streamline agent configuration.
- Architected and optimized real-time analytics dashboards with **Apache ECharts**, delivering performance improvements for high-volume data visualization via **Webhooks** and **Server-Sent Events**.
- Engineered **TypeScript** APIs and backend services integrating **Twilio** with advanced **LLMs (GPT, Claude, Gemini)**, enabling robust configuration and reliable execution of AI voice agents.
- Contributed to **SDKs (TypeScript & Python)** to provide developers with streamlined access to API services.
- Integrated **PostgreSQL** as the primary database through **Prisma ORM** and introduced **Redis** as a caching layer to improve backend performance and scalability.
- Integrated **Stripe API** for subscription management, implementing secure billing workflows and enabling customers to manage payments and plans seamlessly.
- Managed cloud infrastructure on **AWS** using **Terraform**, ensuring scalable, reliable, and cost-efficient deployments.
- Implemented product analytics via **Posthog**, enabling data-driven insights and improving customer support capabilities.
- Authored and maintained customer **documentation** using **Mintlify** and **MDX**, improving onboarding and knowledge-sharing across teams.
- **Led on-call support rotations**, performed incident triage and root-cause analysis, and drove immediate resolutions alongside cross-functional teams to reduce downtime and strengthen system reliability.

EXPERIENCE



Senior Software Engineer

Matternet

📅 02/2019 - 10/2022 📍 Mountain View, United States

Built and scaled software for autonomous drone operations, enabling operators to plan, simulate, train, and monitor regulated medical delivery flights. Improved Mission Control and simulation tooling to support safe commercial operations and real-time observability.

- Maintained and enhanced mission-critical frontend applications using **React**, **Next.js**, and **TypeScript** to support autonomous drone operations and regulated medical delivery workflows.
- Implemented **Mapbox-based geospatial visualizations with clustering** to display real-time drone telemetry, enabling Mission Control features for flight planning and operational oversight in commercial BVLOS deployments.
- Built simulation and training systems using **Cesium**, **Typescript**, **Python** and internal tooling to model flight scenarios, edge cases, and operator workflows without live aircraft.
- Developed backend services and APIs using **Node.js**, **Go**, and **REST/WebSocket** interfaces to manage missions, telemetry streams, and system states at scale.
- Architected real-time observability pipelines leveraging **WebSockets**, event-driven services, and **PostgreSQL** for operational visibility and historical analysis, with data visualized using **Recharts**.
- Managed and configured cloud infrastructure on **AWS** using **AWS-CDK**, supporting secure, scalable deployments with production monitoring and reliability best practices.



Senior Software Engineer

Webflow

📅 06/2017 - 01/2019 📍 San Francisco, United States

Built core frontend systems for Webflow's visual website builder, powering intuitive, no-code design workflows. Led development of reusable component systems and performance-critical editor features used by thousands of creators in productions.

- Built and evolved core **Designer UI features** using **JavaScript (ES6+)**, **React**, **HTML**, and **CSS**, improving layout editing, class management, and overall authoring performance.
- Contributed to **Interactions 2.0**, implementing timeline-based and scroll-driven animations using **JavaScript**, **React**, and **animation/state management patterns**, enabling rich motion design without custom code.
- Helped deliver **CSS Grid support** in the Designer, translating modern **CSS Grid specifications** into an intuitive visual editing experience while ensuring clean, exportable markup.
- Developed and maintained **CMS features and data workflows** using **Node.js**, **REST APIs**, and backend services, supporting content modeling, bulk import/export, and scalable content delivery.
- Collaborated across frontend and backend teams to design and integrate **API contracts**, ensuring reliable communication between the Designer, CMS, and publishing infrastructure.
- Improved platform stability and developer velocity by contributing to **frontend architecture**, **shared components**, and **internal tooling**, balancing rapid feature delivery with long-term maintainability.



Full Stack Software Engineer

Meta

📅 12/2015 - 06/2017 📍 New York, United States

Built an application called Moments that allows users to share their photos and supports face recognition.

- Used **React** for building a web application and **React Native** for a mobile application targeting **Android** and **iOS** devices.
- Designed and implemented rich, responsive UI components using **React** and **TypeScript**, ensuring high performance and accessibility.
- Optimized frontend code for load time and **responsiveness**, implementing **lazy loading** and **code splitting** strategies.
- Designed and implemented backend APIs to support **user authentication**, **photo uploads**, and **face recognition workflows**.
- Built secure data access layers and API contracts to ensure consistency between web, mobile, and backend services.
- Utilized **Relay** and **GraphQL** to address over-fetching issues and maintain consistency during service integration.

SKILLS

Language Preferences

HTML, CSS, JavaScript, Typescript, Python, Go, C#, JAVA

Frontend

React, Next.js, React Native, Electron, Vue, Redux, Zustand, MobX, MUI, TailwindCSS, ShadCN, Storybook, D3.js, Chart.js, Recharts, Apache ECharts

Backend

Node.js, Express.js, Nest.js, FastAPI, Django, .NET, Springboot, PostgreSQL, MySQL, MongoDB, Redis, Kafka, RabbitMQ, Celery, Prisma, SQLAlchemy, Microservice, RESTful API, GraphQL

Tools & Platforms

AWS, GCP, Supabase, Firebase, Docker, CI/CD, Terraform, AWS-CDK, Mapbox, Shopify

Testing

Jest, Mocha, Pytest, Playwright, Cypress