

Sharath Challa

Senior Software Engineer | AI Systems Engineer | TypeScript | React | Node.js | Platform Engineering

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PROFESSIONAL SUMMARY

Senior Software Engineer with 10+ years of experience building SaaS products, enterprise platforms, developer tooling, cloud-native applications and AI-powered systems. Strong background in TypeScript, React, Next.js, Node.js, PostgreSQL, Docker, microfrontends and platform engineering. Founder of V12 Labs, focused on production AI systems, AI agents, RAG/document QA workflows and enterprise software modernization.

CORE SKILLS

Programming: TypeScript, JavaScript, Node.js, Go

Frontend: React, Next.js, Angular, AngularJS, Vite, Tailwind CSS, Microfrontends, Module Federation

Backend & Data: REST APIs, PostgreSQL, MongoDB, Redis, Elasticsearch, message queues

Cloud & DevOps: Docker, Kubernetes, OpenShift, CI/CD, GitHub Actions, GitHub Apps, CLI tooling

AI & LLM Systems: AI Agents, LLM Applications, RAG, Document QA, LangChain, LangGraph, OpenAI, Anthropic, MCP, tool-calling

Architecture: Platform Engineering, Multi-tenant SaaS, Distributed Systems, Event-driven Systems, Real-time Systems, MQTT, Enterprise Modernization

PROFESSIONAL EXPERIENCE

Founder & AI Systems Engineer | V12 Labs | Hyderabad / Remote | 2026 - Present

- Founded an AI engineering and automation consultancy focused on AI agents, enterprise automation, document intelligence and software modernization.
- Designed AI agent and RAG prototypes for knowledge retrieval, document QA and workflow automation using LangChain/LangGraph patterns, OpenAI/Anthropic models and MCP/tool-calling architectures.
- Delivered Cypress Lawn modernization work, migrating legacy Electron desktop workflows toward a modern web-based application architecture and improving maintainability/deployment flexibility.
- Open-sourced CrewKit, an experimental framework exploring production AI agent architecture, orchestration, reliability and developer ergonomics.

Lead Software Engineer | Sidewalk | Remote | Jul 2022 - Mar 2026

- Lead engineering for an AI-powered CRM platform tailored for residential real estate agents.
- Architect and implement full-stack product capabilities using React, TypeScript, Node.js, PostgreSQL, Docker and Vite.
- Build reusable UI components, backend APIs and data workflows across CRM modules to improve collaboration and operational efficiency.
- Partner with product and business stakeholders to convert complex real estate workflows into scalable software architecture.

Senior Software Engineer | UnitedHealth Group | Hyderabad, India | Feb 2020 - Aug 2022

- Built TechHub, an internal infrastructure platform for provisioning and managing enterprise IT products.
- Developed high-performance web applications using Next.js and TypeScript, with a focus on maintainability and developer experience.
- Implemented microfrontend architecture with Webpack Module Federation to support independent product integrations and release cycles.
- Created CLI tools and GitHub Apps to automate engineering workflows and reduce manual developer operations.

Member Technical Staff | Lantronix | Hyderabad, India | Jan 2017 - Feb 2020

- Developed cloud-connected IoT management dashboards for monitoring uptime, latency, and operational health of console managers and connected IT equipment.
- Implemented MQTT-based real-time communication and event-driven workflows for device monitoring, notifications, and operational visibility.
- Built multi-tenant, responsive dashboards using Angular and AngularJS with data visualization for performance and status insights.

Software Development Engineer | Fropcorn | Hyderabad, India | May 2015 - Jan 2017

- Built Node.js backend APIs for media management, large video uploads, data storage, and video transcoding workflows.
- Implemented Redis-backed processing and FFmpeg-based transcoding to support media compatibility across platforms.
- Developed AngularJS/Bootstrap content portal for movie and TV metadata management and original video file uploads.

SELECTED PROJECTS

CrewKit - Open-source AI Agent Architecture | V12 Labs | 2026

- Built and released an experimental open-source framework for production AI agent architecture patterns, focusing on orchestration, reliability, and tool-driven workflows.

Cypress Lawn Electron-to-Web Migration | V12 Labs | 2025 - 2026

- Modernized legacy Electron application workflows into a web application approach, supporting maintainability and deployment improvements for enterprise operations.

TechHub - Enterprise Developer Platform | UnitedHealth Group | 2020 - 2022

- Developed an internal platform that emulated an on-premise AWS-like ecosystem and enabled partner teams to integrate IT product offerings with reduced release-cycle dependency.

EDUCATION

Bachelor of Technology, Computer Science | SR University, Warangal, India | 2015