

David Crush

Senior Software Engineer · Distributed Systems · Cloud Architecture
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SUMMARY

Senior software engineer with 10+ years of enterprise experience designing and operating distributed systems at scale. Extensive background in event-driven microservice architecture, serverless AWS infrastructure, and cloud-native backend development. Proven track record leading cross-functional teams and vendors, driving technical modernization efforts, and delivering high-availability systems serving millions of users across Disney Parks & Resorts and ESPN platforms. Comfortable operating from individual contributor through technical lead, including architecture ownership, backlog direction, and vendor governance.

TECHNICAL SKILLS

Languages: Go, TypeScript/JavaScript, Python, Java, SQL

Cloud & Infrastructure: AWS (Lambda, EventBridge, API Gateway, SQS, Kinesis, IoT, CloudFront, S3), Docker, Kubernetes, Terraform, Serverless Framework, NGINX, Varnish

Databases: MongoDB Atlas, PostgreSQL, DynamoDB

Frameworks & Libraries: React, Angular, Node.js, .NET Framework, Flutter, Laravel

Practices: Event-driven architecture, microservices, serverless, API design, TDD, Agile/SAFe, LLM integration, vendor governance

EXPERIENCE

Founder & CTO | Ethyx Technology LLC

July 2026 – Present

Building a multi-provider AI platform (ethyx.ai) in pre-launch beta.

- Architected a provider-agnostic AI platform integrating Claude, OpenAI, Gemini, Grok, and DeepSeek, allowing users to switch between providers and models at the message level.
- Built Google Drive and Dropbox integrations for artifact storage, and implemented a Projects system for persistent workspace organization.

Senior Software Engineer | Disney Experiences

August 2025 – July 2026

Led architecture and execution across the Disney Parks & Resorts Operations Platform.

- Designed and implemented a custom API Gateway using NGINX and Varnish, reducing p99 latency from 10s to 100ms (100x improvement), cutting the server fleet from 10 nodes to 2, and delivering a 5x reduction in infrastructure cost.
- Diagnosed and resolved a critical throughput crisis in which Lambda fan-out against a shared Kinesis stream was producing a 90% throttle error rate at peak loads of 200–300k events/hour (~1M events/day) — a problem that couldn't be solved by adding shards without prohibitive cost. Co-designed and solely implemented a migration to AWS EventBridge Event Bus, eliminating throttling entirely and restoring reliable message delivery at scale.
- Built an agentic code modernization pipeline using Claude, the OpenHands SDK, and Python to autonomously refactor 100–150 repositories; reviewed and merged all resulting PRs as the sole human in the loop.
- Provided technical leadership and mentorship to teammates and external vendors, including architecture review, code review, and knowledge transfer.

Lead Software Engineer | Disney Experiences

August 2023 – August 2025

Technical lead on OpSheet Modernization, Disney's internal operations scheduling platform, coordinating with vendor partner Globant.

- Designed event-driven microservice architecture for the Parks & Resorts Operations Platform, targeting high availability and low latency at enterprise scale.
- Built serverless microservices in Go on AWS Lambda backed by MongoDB Atlas, establishing the core backend service layer.
- Developed a TypeScript Composite API enabling clean separation between microservices and multiple UI clients.
- Created front-end applications in Angular and Flutter, delivering both web and mobile interfaces from shared architecture.
- Directed a server-driven UI implementation with AngularJS and .NET that replaced 20 individually developed CRUD screens with a single dynamic rendering engine driven by JSON configuration, reducing UI development scope by approximately 20x.
- Spearheaded a cloud-native data migration pipeline using AWS Lambda, SQS, and Kinesis with real-time client notification delivery.
- Led hiring: authored interview materials covering behavioral and technical dimensions, and conducted interviews to expand team capacity.
- Owned backlog construction and management across multiple epics and SAFe Program Increments.

Senior Software Engineer | Disney Parks & Resorts

July 2019 – August 2023

- Led the team's first Angular 2+ web application, establishing front-end architecture standards and serverless deployment patterns used by subsequent projects; applications served 100–2,000 cast members across park operations.
- Implemented IoT integrations using AWS IoT and Kinesis to automate safety-critical monitoring — including real-time temperature alerting for animal habitats and hazard detection on construction sites — replacing manual inspection cycles with automated notifications.
- Designed and delivered serverless backend systems using Lambda, API Gateway, and CloudFront meeting four-nines uptime (99.99%), p99 < 1s latency, and strict concurrency limits across Parks operational APIs.
- Rewrote an existing iOS Swift application in Flutter as a 2-person team in 2 months — adding Android support in the process — with no prior Flutter experience and no defined budget or timeline. The original app took 1.5–2 years to build; delivery was driven purely by business urgency.

Software Engineer | Disney Parks & Resorts

October 2017 – July 2019

- Partnered with product and design to redesign the 2017 NFL Draftcast experience, resulting in a 300% increase in page views — the highest-traffic period in ESPN.com history to that point.
- Owned live-updating scoreboards, standings, schedules, and game packages across ESPN.com and the ESPN App.
- Served in Consumer Tech Ops on-call rotation, providing 24/7 support for consumer-facing web products.

Software Engineer II – Front End | ESPN

August 2016 – October 2017

- Built and maintained features across ESPN.com, ESPNFC.com, and ESPNDportes.com; served in Consumer Tech Ops on-call rotation providing 24/7 support for consumer-facing digital products.

Web Developer I | ESPN

June 2015 – August 2016

- Led migration from ColdFusion to Laravel/PHP; introduced Git, unit testing, code review, and daily standups; built a targeted mass email platform for the college community.

Lead Web Application Developer | Roanoke College

August 2013 – June 2015

EDUCATION

B.S., Applied Computer Science · Roanoke College · 2012–2015 · GPA 3.4