

# Michael Ragan

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Staff Full-Stack Engineer | Scalable Systems & Distributed Architecture

## PROFESSIONAL SUMMARY

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Staff-level full-stack engineer with 17 years building scalable, high-throughput systems across fintech, enterprise SaaS, and cloud infrastructure. Specialize in modernizing legacy frontends, breaking apart architectural bottlenecks, and helping teams ship faster without introducing risk. Currently leading engineering at MEMX, a stock exchange platform, building real-time auction infrastructure.

## CORE COMPETENCIES

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Distributed Systems   System Design   Cloud Architecture (AWS/Kubernetes)   Identity & Access Management   Technical Leadership   Exchange & Payments Infrastructure

## TECHNICAL SKILLS

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**Frontend:** React, TypeScript, Next.js, Redux/RTK

**Backend:** Node.js/Express, Python/FastAPI, Java/Spring Boot, Go

**Data & Databases:** PostgreSQL, ClickHouse, Oracle SQL

**Cloud & Infrastructure:** AWS (EKS, ECS, Lambda), Kubernetes, Docker, GitLab CI/CD

**Security & Identity:** OAuth, SAML, JWT, RBAC, Okta

## PROFESSIONAL EXPERIENCE

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### Lead Software Engineer

MEMX

Oct 2025 – Present

Remote

- Lead a 4-engineer team across all MEMX applications, overseeing architecture, code quality, and delivery across the full portfolio
- Within that team, personally architected and built the IPO auction administration platform – a greenfield project – with one junior frontend engineer: wrote the entire Node.js backend and 90% of the React frontend, integrating with MEMX's existing order book and quoting APIs to let the exchange book, control, and monitor live auction data; delivered in 4 months while continuing to lead the broader team
- Architected real-time WebSocket streaming for order book updates, auction metrics (indicative price, volume), and auction list synchronization across concurrent users with 500ms max latency
- Designed the system to handle large block orders (100+ orders representing millions of shares) using last-write-wins concurrency and a RESTful mutation layer; built rate limiting and standardized HTTP/API error responses
- Implemented three-tier RBAC (viewer, editor, admin) using Okta groups with JWT validation on every backend request, optimized via LRU cache with configurable eviction windows

### Lead Full-Stack Engineer

Convera

Jan 2024 – Jul 2025

Remote

- Led an 8-person pod breaking payment functionality out of a monolith into microservices, shipping the MVP two weeks early with no major production issues
- Primarily frontend-focused: built the React/TypeScript frontend for transaction dashboards, KYC onboarding, and sanctions screening handling 100K+ daily users
- Also designed payment and screening APIs (Node.js/Express on AWS Lambda) processing 50K+ requests per day; security team handled final threat modeling and compliance sign-off
- Set up GitLab CI + Docker + AWS EKS pipeline that took the team from releasing every few days to multiple deploys per day

- Optimized critical PostgreSQL queries and Python data scripts that were bottlenecking during peak load; saw 45% better throughput
- Pushed for test-driven development with Jest and Playwright; monthly bug count dropped from 8 to 2

### Principal Software Engineer

Oracle

Feb 2017 – Jan 2024  
Remote / Redwood Shores, CA

- Led several efforts to break monoliths into microservices, which let product teams deploy independently and ship features about 3x faster
- Built a Node.js backend for Oracle Digital Assistant that could auto-resolve common customer issues; cut support tickets in half
- Ran production Kubernetes clusters on OCI handling 10M+ requests per day; maintained 99.99% uptime through chaos testing and capacity planning
- Designed data models and built Java/Spring backends to process large datasets (500GB+); optimized slow queries that brought processing time down about 70%
- Built React SPAs with Redux and Oracle JET that made internal tools easier to use; support tickets for those tools dropped significantly
- Implemented SAML and OpenID auth with WebLogic, giving enterprise customers SSO with JWT tokens
- Mentored 15+ engineers through code reviews and architecture discussions; several moved into senior or management roles

### Senior Software Engineer

Oracle

Jan 2013 – Feb 2017

- Built distributed backend services with Java, Spring, and Hibernate; used Maven for build consistency across 20+ microservices
- Developed JavaScript libraries and PHP services with MySQL that let customers embed our applications; over 50 enterprise customers used this
- Built SSO authentication in PHP and Perl that cut login issues by about 60%

### Software Engineer

Oracle

Oct 2008 – Dec 2012

- Moved from technical support into a software engineering role, building production code within the first year
- Created JavaScript and Oracle JET frontends that improved user engagement by about 35%
- Did Linux system admin work and improved CI/CD with Jenkins and Docker; cut build times by more than half

## SIDE PROJECTS

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### JSON-to-PostgreSQL Schema Generator — Python

2024 – 2025

Real-world JSON contract analyzer that reverse-engineers data sources and outputs fully indexed, production-ready PostgreSQL schemas with automated index and primary key optimization.

### Resume & Application Tracking System — Next.js, Go, PostgreSQL

2024 – 2025

Built a React SPA with TypeScript and React Hooks for efficient job application tracking; designed RESTful Go APIs with JWT authentication. Includes deadline reminders and full application lifecycle tracking.

### Real-Time Metrics Dashboard — FastAPI, WebSocket, Chart.js

2024

Implemented streaming architecture with WebSocket connections and real-time data visualization; handles 1,000+ events per second with sub-100ms latency.

## EDUCATION

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### B.S. Computer Science (Network and Communications)

DeVry University, Fort Washington, PA

March 2007