

## Michael Cox

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Website: <https://MikeCox.xyz> | Zeriq AI IDE: <https://zeriq.dev> (By: Me)

**Objective:** Senior Agentic AI Engineer / AI Systems Architect role focused on autonomous AI systems, multi-agent orchestration, LLM infrastructure, AI observability, evaluation frameworks, and scalable cloud-native AI platforms.

## Summary

Senior Software Engineer and Agentic AI Systems Architect with 15+ years of experience designing and building enterprise-scale platforms, distributed systems, cloud-native infrastructure, and modern AI-driven applications. Deep expertise in autonomous AI agents, multi-agent orchestration, LLM workflows, AI evaluation systems, observability pipelines, retrieval augmented generation (RAG), and scalable AI infrastructure. Strong background designing end-to-end AI systems utilizing Python, TypeScript, Node.js, FastAPI, LangGraph, LangChain, OpenTelemetry, vector databases, cloud infrastructure, and modern orchestration frameworks. Experienced building production-grade AI platforms with telemetry, tracing, evaluation pipelines, guardrails, HITL workflows, tool-calling architectures, structured outputs, and scalable microservice deployments.

## Advance Level Skills

Agentic AI Systems, Autonomous AI Agents, Multi-Agent Systems, LLM Orchestration, LangGraph, LangChain, CrewAI, AutoGen, Semantic Kernel, OpenAI APIs, Claude APIs, Gemini APIs, RAG Pipelines, Vector Databases, AI Observability, AI Evaluation Frameworks, LangSmith, LangFuse, Arize Phoenix, OpenTelemetry, Structured Outputs, Prompt Engineering, AI Guardrails, HITL Systems, Workflow Orchestration, AI Tool Calling Systems, Context Management, AI Runtime Infrastructure, Python, TypeScript, Node.js, FastAPI, GraphQL, REST APIs, gRPC, Distributed Systems, Microservices, Event-Driven Architectures, Kafka, Redis, PostgreSQL, PgVector, AWS, Docker, Kubernetes, Terraform, CloudFormation, GitHub Actions, React, Next.js.

JSON, API Development, API Integration, Software Architecture, UI Wire frames/Mockups, Command Line, GIT, GitHub Actions, Build Pipelines, Jenkins, CircleCI, Design Patterns, JIRA, AWS Services, GCP Services, Terraform

## Experience

### Niebex Inc, Sunnyvale, CA

Nov 2022 to May 2026

Sr Agentic AI & Full Stack Systems Engineer (Consultancy for Voomra Platform)

Role | Responsibilities: Lead architect and senior engineer responsible for designing and building AI-powered platform infrastructure and autonomous workflow systems for the Voomra mobility and property rental platform. Designed scalable multi-agent architectures, AI orchestration systems, cloud-native infrastructure, and intelligent operational tooling focused on reservations, fleet operations, analytics, evaluation systems, and AI observability.

- Designed distributed AI agent platform architecture using FastAPI microservices
- Built AI orchestration workflows utilizing LangGraph and structured state coordination
- Developed evaluation pipelines with replay testing, schema scoring, and regression analysis
- Implemented AI telemetry and tracing systems using OpenTelemetry, LangSmith, and Arize Phoenix
- Designed AI guardrail systems with policy enforcement, budget controls, and safety workflows
- Developed vector-based retrieval pipelines and contextual memory systems
- Built cloud-native AI infrastructure with Docker, Kubernetes, Redis, PostgreSQL, and AWS
- Designed scalable event-driven AI runtime systems and asynchronous workflow processing
- Built frontend AI operational dashboards utilizing React, Next.js, and TypeScript
- Led architecture decisions, technical planning, roadmap execution, and engineering coordination
- Managed CI/CD automation pipelines and cloud infrastructure deployments
- Collaborated across product, operations, and engineering teams on AI platform strategy

Technologies: Python, TypeScript, Node.js, FastAPI, LangGraph, LangChain, OpenTelemetry, Redis, PostgreSQL, PgVector, React, Next.js, GraphQL, REST APIs, AWS, Docker, Kubernetes, Terraform, GitHub Actions, LangSmith, Arize Phoenix, DynamoDB, CloudFormation, ECS, Lambda, StepFunctions

- Full Stack Software and Cloud Infrastructure Architecture & Design
- Management and Lead Development Team
- Breakdown projects and deliverables into epics and stories
- Communicate with stakeholders, management, and cross teams.
- Agentic AI Systems, Autonomous AI Agents, Multi-Agent Systems, LLM Orchestration, LangGraph, LangChain, CrewAI, AutoGen, Semantic Kernel, OpenAI APIs, Claude APIs, Gemini APIs, RAG Pipelines, Vector Databases, AI Observability, AI Evaluation Frameworks, LangSmith, LangFuse, Arize Phoenix, OpenTelemetry, Structured Outputs, Prompt Engineering, AI Guardrails, HITL Systems, Workflow Orchestration, AI Tool Calling Systems, Context Management, AI Runtime Infrastructure, Python, TypeScript, Node.js, FastAPI, GraphQL, REST APIs, gRPC, Distributed Systems, Microservices, Event-Driven Architectures, Kafka, Redis, PostgreSQL, PgVector, AWS, Docker, Kubernetes, Terraform, CloudFormation, GitHub Actions, React, Next.js.
- UI Components & Modules Development and Design
- ExpressJS Rest & GraphQL API Development
- Developed AWS lambda functions in Node.js.
- Developed REST APIs with AWS lambda and API Gateway.
- Milestone & Deliverable Estimates
- Nextjs Django, React.js, React Native, Solid.js (SSR, CSR, SSC)
- Payment integrations: Strip, Mpesa, MTN
- Jest, React-testing-library, E2E Cypress.io, Storybook
- HTML5, CSS, Mui, Tailwind, Chakra
- AWS, GCP, Vercel & Terraform
- Database: Postgres, Mysql, MongoDB, DynomoDB, and Redis

## **DocuSign, San Francisco CA**

June 2022 to Nov 2022

Sr Full Stack Software Engineer (Short Contract)

Role | Responsibilities: Build and design reusable react components as a package consumed by third party teams withing Wayfair. Using ES6+ and TypeScript w/ Unit test cases and End to End Testing. Converting designs to code. Daily task included build and development orchestration, code reviews, management collaborations and team meetings utilizing Jira with a Sprint process.

- Agentic AI Systems, Autonomous AI Agents, Multi-Agent Systems, LLM Orchestration, LangGraph, LangChain, CrewAI, AutoGen, Semantic Kernel, OpenAI APIs, Claude APIs, Gemini APIs, RAG Pipelines, Vector Databases, AI Observability, AI Evaluation Frameworks, LangSmith, LangFuse, Arize Phoenix, OpenTelemetry, Structured Outputs, Prompt Engineering, AI Guardrails, HITL Systems, Workflow Orchestration, AI Tool Calling Systems, Context Management, AI Runtime Infrastructure, Python, TypeScript, Node.js, FastAPI, GraphQL, REST APIs, gRPC, Distributed Systems, Microservices, Event-Driven Architectures, Kafka, Redis, PostgreSQL, PgVector, AWS, Docker, Kubernetes, Terraform, CloudFormation, GitHub Actions, React, Next.js.
- Frontend React + React Native + Redux + ContextAPI
- Backend: Express.js + Node.js
- Jest, React-testing-library, E2E Cypress.io, Storybook
- UI Components & Modules Development and Design
- NPM Package Development
- Milestone & Deliverable Estimates
- HTML5, CSS, DOM, HTTP Protocol
- Code Reviews
- Web Service Consumption (GraphQL & Rest)
- Project Management w/ Jira & Scrum coordination
- GitHub Source Control
- AWS (CloudFront, EC2, Lambda, Fargate, CloudFormation)

## **Walmart Ecommerce, Sunnyvale CA**

Jan 2020 to March 2022

Sr Level III Full Stack Engineer Contractor

Role | Responsibilities: Built and maintained React Frontend UI components and modules utilized by clients for catalog maintenance on Walmart.com. Participated in Bi-monthly Sprint planning and contributing to design architecture and estimations. Daily activities included both Front and Backend development Full Stack. Closely collaborating with multiple internal API teams across the organization on API contracts, integrations, and debugging issues. Participated in lead release master for all server environments.

- UI Components & Modules Development and Design
- Node.js & Python API Backend Development & Integration
- Milestone & Deliverable Estimates
- Frontend React + Redux
- GraphQL
- Jest, Mocha, Chai, Enzyme Unit Testing
- JavaScript & Nodejs ES6+, TypeScript, Python
- HTML5, CSS, DOM, HTTP Protocol
- Production, Staging, and Development Environment Deployments (Looper / Jenkins) & Release (release master)
- Web Service Expose & Consumption (REST)
- Environmental CCM Configurations
- Project Management w/ Jira & Scrum coordination
- Built serverless application in Node.js with AWS Lambda, SQS, DynamoDB and S3.
- Developed REST APIs with AWS lambda and API Gateway
- Wrote AWS lambda functions in Node.js.
- Set up metrics monitoring with AWS CloudWatch, EventBridge, CloudTrail and SNS.
- Utilized AWS services including EC2, S3, SQS, SNS, RDS, Cloudfront and Lambda.
- GitHub Source Control

## **Facebook, Menlo Park CA**

Jan 2020 to June 2020

Full Stack Software Engineer Contractor

Role | Responsibilities: Enhance internal logistic application using ReactJS and HackPHP.

- ReactJS, Relay, React Unit Testing
- HackPHP
- Management Database
- Build: Source Control, Code Reviews, Manage Server and Database Environments

## **Apple, Cupertino CA**

May 2018 to Jan 2020

Sr. Lead Software Engineer Contractor

Role | Responsibilities: Lead engineer on new application for forecasting and factory meta data. Meet with Apple iPhone Ops division to gather needs, requirements, and business rules for application architect and design. Setup Technology stack, deployment process, Database Schemas, Rest API, and Documentation. Worked with iPhone HWTE devOps with releases and builds

- Application Design & Planning
- Milestone & Deliverable Estimates
- Developer Mentoring
- Node.js, Python OOP Programming
- Client Side Technologies: Heavy ReactJS, HTML5, CSS3, JSON, JavaScript ES6+
- Database: MYSQL
- Vagrant
- Web Service Integrations (REST)
- Centos 7
- Optimized Development Process
- Code Review

**SafeRyde Technologies Inc, Atlanta GA**

June 2015 to April 2018

Lead Software Engineer

Role | Responsibilities: First Technical Hire to lead both the design and architecture of application stack. My role included leading a onsite team of 7 and off shore resources. Daily responsibilities included design, project management, and programming using Ruby for server side scripts, RoR for Frontend interface, PHP Backend API Services. Daily programming also include modern frontend client side technologies. Developed Ruby Gems for Third party SDKs. I also fully managed AWS Cloud Services while reporting directly to CTO.

- Heavy ReactJS and AngularJS
- Javascript & Python Programming
- Application & Infrastructure Design
- Technical On-boarding Interviewing
- Advance Level Web Service Integrations (SOAP & REST)
- UI Design (Mockups & Wire framing)
- HTML, HTML5, CSS3,XML,JSON, JavaScript ES6+ , jQuery, AJAX
- SQL, MYSQL, MongoDB, AWS DynamoDB, MYSQL Stored Procedures
- Version Control (Subversion)
- Stack Administration (Config Apache, Database Topology, DNS, AWS Cloud Administration)
- Agile Development
- Utilized AWS services including EC2, S3, RDS, Cloudfront and Lambda.
- AWS Cloud Services

**GEARS Consulting Group Inc, Sunnyvale CA**

Mar 2014 to June 2019

Adhoc Software Architect &amp; Consultant

Role | Responsibilities: Subcontracting on large to Ad Hoc projects for various clients throughout the US. Serving as a consultant by designing, developing, and implementing applications using Agile. Designed and Developed Application using Ruby and PHP while utilizing MVC Frameworks, modern deployment, and Unit Testing Frameworks. My role and responsibilities include application architecture, programming, and project management.

**Clients Include:** Ingo Money via Judge Group, Marietta Fire & Safety Services and Cox Communications Co

- Nodejs, Python & Typescript Programming
- Advance Level Web Service Integrations (SOAP/REST/GraphQL)
- Apache Kafka
- React, and React Native
- UI Design (Mockups & Wire framing)
- HTML5, CSS3,XML,JSON, AJAX
- SQL, MYSQL, MONGO DB, MYSQL Stored Procedures
- Stack Administration (Config Apache, Database Topology, DNS, Amazon Cloud Administration)
- Django, & Express.js

**CBS Interactive via Gears Consulting**

June 2016 to Dec 2016

Sr Full LAMP Stack Engineer Contractor

Lead Developer on trainerpass.com a CBS new vertical.

- PHP OOP Programming Backend
- ReactJS Frontend
- Technologies: HTML5, CSS3, JSON, JavaScript ES6+
- SQL, MYSQL, AWS DynomoDB
- Version Control (GIT)
- LAMP Stack Administration (Compile PHP, Config Apache, Database Schema)
- Doctrine ORM
- Symphony PHP Framework
- PHPDocs
- PHPUnit and Selenium Testing
- Advance Level Web Service Integrations (REST)
- Web Service API Docs and Design
- Varnish Cache & Load Balance Server

**NY Institute of Photography New York, NY**

Jan 2014 to February 2015

Software Architect Consultant

I designed and developed multiple Restful Web Services and consumed third party web services. Daily responsibilities included data integrations and database optimization using stored procedures and code optimizations.

Rewrote many legacy API's and back office administration applications.

- PHP OOP Programming
- Data Integrations (Rest & SOAP)
- UI Design (Mockups & Wire framing)
- HTML, HTML5, CSS3, XML, JSON, JavaScript, jQuery, AJAX, Advance
- SQL, MYSQL, MONGO DB, MYSQL Stored Procedures
- Version Control (Subversion)
- LAMP Stack Administration (Compile PHP, Config Apache, Database Topology, DNS, AWS)
- Codeigniter & Laravel PHP Frameworks
- Designed Technical Design Documents and Flow Diagrams

**Ticketmaster Atlanta, GA**

Jun 2013 to Feb 2014

Sr Software Engineer

I designed and developed multiple Restful

Web Services and consumed third party web services. Daily responsibilities included data integrations and database optimization using stored procedures and code optimizations. Rewrote many legacy API's and back office administration applications.

- PHP OOP Programming & Bash Scripting
- Advance Level Web Service Integrations
- Data Integrations
- UI Design (Mockups & Wire framing)
- HTML, HTML5, CSS3, XML, JSON, JavaScript, jQuery, AJAX, Advance
- SQL, MYSQL, MONGO DB, MYSQL Stored Procedures
- Version Control (Subversion)

**Cox Com Inc. Atlanta, GA**

Jan 2013 to May 2013

Sr Level III PHP Software Engineer Contractor At Cox Communications I built and managed a team of developers to deliver a Captive portal and a enterprise portal for

front facing customers. These projects consisted of tight deadline, daily meetings, estimates, advance 3rd party web services integrations, and lengthy business requirements.

- PHP OOP Programming and Bash Scripting
- Advance Level Web Service Integrations
- Project estimation
- UI Design (Mockups & Wire framing)
- HTML, HTML5, CSS3, XML, JSON, JavaScript, jQuery, jQuery Mobile,
- AJAX, COMET, Advance SQL, MYSQL, MONGO DB, Oracle
- Version Control (Subversion & GIT)
- LAMP Stack Administration (Compile PHP, Config Apache, Database Topology, Load Balancers)
- Interview Sr Level PHP Developers
- Symfony, Laravel, & Yii PHP Frameworks
- Designed Technical Design Documents and Flow Diagrams
- Manage offshore and remote onshore development teams

**Education**

San Jose State University San Jose, CA  
B.S Management Information Systems

June 2005 to May 2010