Isaiah Coleman (he/him)

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https://github.com/iccole

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Fullstack Web and DevOps engineer with 3+ years as an engineering manager and 10+ years as an individual contributor. Experienced project lead and mentor with a proven track record of taking ideas from nascent projects to containerized, unit-tested, code-as-infrastructure defined, CI/CD delivered repositories in cloud native and hybrid cloud infrastructure.

Core Competencies

Leadership & Management: Team Leadership • Project Management • Agile Development • Hiring & Mentoring • Cross-functional Collaboration
Backend Technologies: Node.js/TypeScript • Ruby on Rails • Elixir • Java • Python • Go • Microservices Architecture
Frontend Technologies: React • NextJS • JavaScript/TypeScript • Material/Materialize • UIKit • Bootstrap
Cloud & Infrastructure: AWS • GCP • Azure • Openshift (OKD) • Kubernetes • Docker • Terraform • Ansible • Puppet • CI/CD Pipelines • Lambda • EC2/ECS • Cloudformation • Github Actions • Gitlab CI/CD
Testing: Jest • Capybara • RSpec • ExUnit • JUnit • Selenium
Containerization & Orchestration: Docker • Podman • Docker Compose • Kubernetes
Development Tools & Practices: Git • Bash • Unit Testing • JIRA • Agile • Kanban • Scrum
AI & LLM Chabot Technologies: Ollama • Hugging Face • Continue • Open Web UI • LiteLLM/Open AI API • MCP

Professional Experience

Duke University Libraries, Senior *Web Application Developer*

2024-present

- Lead developer of ruby on rails web applications used by tens of thousands of faculty, staff, and students annually
- Orchestrate development lifecycle and project planning of various projects working with a distributed team of domain experts, across different 3+ countries and 4+ organizations
- Contribute to upstream open source community projects from our forked repositories submitting multiple features and patches a year
- Migrate legacy Linux VM systemd service based applications to containerized kubernetes (OKD) services reducing deployment time and by 70% and improving consistency across environments
- Maintain hybrid (on-prem and cloud) infrastructure as code with Ansible, Helm supporting 12+ services across clusters
- Implement CI/CD pipelines adding automatic deployment, test automation and code-linting, to active and legacy development projects reducing manually deployment tasks by 60%
- Preserve service reliability by implementing scalable application architecture and tuning open-source technologies to prevent bad-bot-related disruptions, handling situations including sporadic +7,000% request/second increases in traffic
- Build LLM-based applications using MCP, reducing manual research/metadata tasks by an estimated 25% for staff

NCSU University Libraries, *Web Application Developer (served as Lead Developer)*

2023 - *Short-term role providing architectural leadership during a transition period.*

- Led containerization of legacy applications, reducing resource usage by ~40% and deployment time by >60%.
- Refactored monolithic legacy applications into microservices using modern frameworks ensuring their longevity and maintainability reducing technical debt backlog by 80% and improving JIRA ticket to feature deployment time by 40%
- Maintained Hybrid Cloud infrastructure using Ansible and Puppet supporting 10+ services
- Led development of integrations with various third party API systems
- Maintained campus-wide web proxying service for online periodical access and developed open source web application used to maintain web stanzas for those third-party services supporting hundreds of thousands of requests daily

Crosscomm, *Lead Backend Developer*

2022-2023

- Architected NextJS services serving dually as team lead for all backend development and heading all SRE/Operations infrastructure responsibilities for AWS infrastructure
- Implemented Node.js/Typescript microservices with AWS Lambda and API Gateway
- Led development of an AWS based high-performance-computing cluster 'manager' for Duke research labs. Providing an interface empowering them to effortlessly create, modify, and deploy slurm workloads to high-performance computing clusters designed to handle GPU-intensive jobs for scientific research endeavors.
- Maintained Cloud Native infrastructure in AWS and Azure with Terraform
- Instituted minimum coding standards guidance and implemented code-linting, and unit-testing through github CI/CD decreasing deprecated feature and defect rates by 30%
- Led client communication and orchestrated development lifecycle, from requirements gathering to system architecture design

LearnPlatform, *Senior Integration Engineer*

2019 - 2022

- Led development of all third party (6+) integrations and designed, implemented, and deployed the strategy (and security policies) through which all third party data was consumed by way of an Elixir backend
- Performed full-stack development with React frontend and Ruby On Rails backend
- Implemented Node.js/Typescript microservices in AWS Lambda using API Gateway, Pub/Sub and other invoke triggers supporting 700k+ messages
- Served as scrum lead, technical sales consultant, and hiring manager. Screened 200+ candidates, performed 30+ technical interviews and helped hire the next 10 engineers.
- Developed in-house engineering practices and ceremonies for unit testing, linting, containerization, standups, code review practices, release planning, and test plans. Progressed team from large waterfall monthly deliveries to a weekly release schedule.
- Managed AWS ECS infrastructure ensuring platform stability to handle increasing load on the system. Implemented distributed architecture that can scale up/down to handle the 300m+ check-in requests a day from district devices.
- Enshrined Cloud Native infrastructure in AWS and GCP in code using Terraform

SAS , *Fullstack Web Developer*

2013 - 2019

- Conducted full-stack software development on Java Web backend and redesigned existing JSP frontends to utilize modern javascript frameworks migrating first to Backbone and later refactoring to React
- Developed java libraries to consume and export metadata in conformance with open EdTech standards: One Roster, Common Cartridge, Open Badging, and Caliper used for interoperability across 40+ integrations with school districts and third-party organizations
- Automated in-house conformance testing, reducing annual testing time by ~70%
- Led development of Java Web SSO integrations, utilizing open source SAML 2.0, OAuth 2.0, and LTI libraries and folding them into in house authentication and access library supporting 4+ million users
- Ensured conformance to federal Child Privacy laws (FERPA, COPPA) developing automated anonymization procedures and defining risk profiles for all collected data

Other Compentencies

Databases & Data Storage: Postgres • Redis • Pubsub • Redshift • Kinesis
Identity & Access Management (IAM): Okta • Cognito • SSO • OAuth 2.0 • SAML 2.0
Security & Compliance: Federal/International Law - FERPA / COPPA / GDPR • WCAG • A11Y

Education

North Carolina State University, Raleigh — *B.S. Computer Science* 2009 - 2013