

Eoin McDonnell

Lead Full-stack & DevOps Engineer

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SUMMARY

Lead Full-Stack & DevOps Engineer with 15+ years of experience building and scaling cloud-native applications on **AWS** and **Azure**. Skilled in **React**, **Next.js**, **Angular**, **Node.js**, **Python**, **Java** and **.NET**, with expertise in **REST/GraphQL** APIs, databases, **CI/CD** pipelines, and real-time dashboards. Experienced in **AI/ML integration**, **vector databases**, and **genAI** solutions. Strong track record of leading teams, mentoring engineers, and delivering reliable, high-performance solutions that drive business impact.

EXPERIENCE

Staff Software Engineer – Team Lead

APAX Software | Lexington, Kentucky

07/2023 – 12/2025

- Architected **AWS cloud infrastructure** using **ECS/Fargate** for high-traffic dashboards, focusing on auto-scaling and caching. Partnered closely with **DevOps** and **SRE** to support reliable performance during peak usage.
- **Standardized CI/CD pipelines** using **GitHub Actions**, **Docker**, and **Terraform**, enabling fully automated, trunk-based deployments; reduced release-related errors by 40% and improved end-to-end delivery efficiency by 60% across multiple services.
- Delivered real-time, data-heavy dashboards with **React** and **Next.js**, focusing on performance, usability, and maintainable component architecture.
- Drove development of internal analytics tools leveraging **AI frameworks** and custom **algorithms** to optimize database access patterns and reduce retrieval times by 50%.
- Championed continuous UX improvements through **Agile** feedback loops with **Product**, **Design**, and **QA**, increasing user task completion rates by 20% across complex, data-intensive workflows.
- Defined and governed a **GraphQL** API architecture using **FastAPI**, establishing schema standards, query conventions, and review guidelines; reduced client-side data overfetching by 35% and improved response consistency.
- Leveraged **Entity** Framework for **ORM**-based database management, ensuring maintainable, efficient interactions with **SQL Server** and **PostgreSQL**.
- Created responsive and pixel-perfect user interfaces with **HTML5**, **CSS3**, **Sass**, and **JavaScript**, ensuring consistency across devices and improving the user experience.
- Strengthened code quality and reliability through **Test-Driven Development (TDD)** using **Jest** and **Mocha**, achieving high test coverage and reducing production bugs.
- Deployed a production **RAG** system leveraging **vector databases**, **semantic retrieval**, and **LLMs** to power conversational and self-service AI experiences.
- Accelerated AI response performance by tuning **embedding** pipelines and **vector** database retrieval, reducing latency and adding real-time processing feedback in the UI.
- Implemented **OCR** pipelines to extract structured data from images such as IDs and receipts, streamlining manual data entry workflows.
- Coordinated team workflows using **Slack** and **Jira**, managing ticket prioritization for junior engineers and improving resolution efficiency.

Lead Software Engineer

Dormakaba | Lexington, Kentucky

05/2020 – 07/2023

- Provided **mentorship** and technical guidance through over **320 code reviews**, promoting team growth and improving code quality.
- Modernized legacy security and access-control platforms into **cloud-native** architectures with caching, **load balancing**, and automated failover; reduced downtime incidents by 30% while supporting thousands of daily users.
- Established and maintained **CI/CD pipelines** with Jenkins, reducing deployment times by 40% and improving overall release cycle efficiency by 30%.
- Translated complex business and compliance requirements into scalable platform features, improving adoption and engagement metrics by 20% across internal and external teams.
- Advanced frontend engineering standards via modern frameworks and **PWA** capabilities, improving mobile performance and reducing load times by 30% for field and partner users.
- Integrated third-party APIs including **Google Maps**, **Twilio**, and **Stripe**, enhancing real-time geolocation, communication, and payment workflows.
- Designed and implemented advanced data management systems using **GCP Cloud Firestore**, and **BigQuery**, cutting retrieval times by 50% and boosting scalability by 40%.
- Produced interactive **data visualizations** with **Chart.js** and **D3.js**, improving real-time insights and analytics.
- Applied **Agile/Scrum** methodologies to drive efficient project delivery, enhancing team collaboration and productivity.
- Delivered scalable user management and **serverless** backend services with **Firebase** Authentication and **Cloud Firestore** for scalable user handling.
- Leveraged **XGBoost** classification models to analyze user behavior and predict feature adoption, informing product decisions and increasing engagement metrics.
- Revamped **Snowflake** data warehouses with optimized schemas and partitioning strategies, improving query performance by 40%.
- Constructed **Elasticsearch** for product discovery, implementing efficient **indexing** and queries; visualized insights with **Kibana** to improve search relevance.
- Optimized **MySQL** database operations, boosting data retrieval speeds by 40% through query optimization and indexing strategies.

Senior Software Engineer

Dormakaba | Lexington, Kentucky

08/2016 – 05/2020

- Led the design and implementation of **RESTful** APIs with **ASP.NET Core**, strengthening platform security and data protection while ensuring efficient data exchange across services
- Enhanced product pages and dynamic cart functionalities using **TypeScript** and **Vue.js**, optimizing **Vue.js's virtual DOM** reconciliation process to improve load times and responsiveness
- Elevated API scalability and resilience through **rate limiting**, **caching**, and response shaping, doubling peak request throughput while maintaining system stability for high-availability access systems.
- Directed the architectural transition from **monolithic** systems to **microservices**, cutting release cycle times by 25% and enabling faster delivery of security updates and customer-driven enhancements.
- Introduced event-driven processing using **RabbitMQ** and **Kafka** to handle high-volume device and system events, increasing processing throughput by 25% and improving real-time responsiveness for access and security operations.
- Modernized and migrated **on-premises** applications to Azure, leveraging **App Service**, **SQL Database**, and **Load Balancer** to enhance scalability, reliability, and cost-efficiency.
- Supported a **polyglot** microservices architecture by incorporating auxiliary **Node.js** services for non-core workloads and integrations, with primary business logic retained in **ASP.NET Core C#**

- Enforced secure **authentication** and **role-based access control** across microservices, improving **authorization** consistency and reducing potential security risks for hundreds of internal and customer-facing users.

Software Engineer

Dormakaba | Lexington, Kentucky

12/2012 – 08/2016

- Administered and secured **Microsoft SQL Server** environments, strengthening backup and recovery processes and reducing maintenance-related operational errors by 40%.
- Upgraded internal search tooling by optimizing indexing, filtering, and query logic, boosting result accuracy for 200+ daily users and lowering support requests by 25%.
- Engineered internal web application with **Node.js** backend service and **AngularJS/Material UI** frontends, streamlining operational workflows and reducing task completion time by 30% for cross-functional business users.
- Created an internal documentation and knowledge platform using JavaScript, adopted by 100+ employees and reducing onboarding friction and recurring support questions by 35%.
- Developed data management workflows and dashboards using **Node.js**, **T-SQL**, and **SSIS** for **ETL** pipelines and metric visualization, improving data accuracy and enabling teams to make informed strategic and operational decisions.
- Automated **QA** workflows using **Python** regression and data validation scripts, covering 50+ critical test cases per release and cutting manual testing effort by 60% while increasing release confidence for internal business systems.

Java Software Engineer

VXL IT | Novi, Michigan

03/2009 – 11/2011

- Delivered interactive dashboards using **jQuery**, **AJAX**, and **D3.js**, delivering actionable insights and improving system monitoring efficiency by 20%.
- Maintained enterprise web applications with Java, **Spring MVC**, **Hibernate**, **JSP**, and **JavaScript**, enhancing page responsiveness and system usability by 15%.
- Created **SOAP**-based web services (**WSDL**) for secure data exchange and transaction handling, enabling reliable communication with external systems.
- Refactored legacy **monolithic Java** applications into modular, service-oriented components using **Spring MVC** and **SOAP** services, increasing maintainability and scalability by 30%.
- Developed and executed unit tests with **JUnit**, improving code reliability and enabling automated verification in CI workflows.
- Managed build, deployment, and **CI pipelines** with **Maven** and **Jenkins**, streamlining release cycles and reducing deployment errors by 25%.
- Partnered with SRE teams to build scalable, interactive dashboards and real-time progress tracking systems, enabling personalized training experiences and data-driven user insights.

Web Developer

BT Ireland | Swords, Fingal, Ireland

04/2006 – 03/2009

- Executed UI and **regression tests** to identify and resolve defects, improving application stability prior to production releases.
- Rolled out **PKI-based e-signature** workflows for a **Java EE** portal application, supporting secure document signing, certificate validation, and compliance-ready audit logging.
- Developed and enhanced server-rendered user interfaces using **HTML**, **JSP**, **CSS**, and **JavaScript**, incorporating early **AJAX** techniques to improve interactivity and user experience in portal applications.

EDUCATION

Master of Science , Computer Science

Northern Kentucky University | 04/2023 – 11/2025

Master of Science , Computer Science

Dublin Institute of Technology | 04/2006 – 02/2008

Bachelor of Arts, Digital Arts

Savannah College of Art and Design | 08/2001 – 05/2005

SKILLS

Cloud Computing: AWS (EC2, S3, Lambda, CloudFormation, Bedrock), Azure (App Services, DevOps, Pipelines, Functions), GCP (Cloud Run, Cloud Functions, Pub/Sub), Serverless Architectures, Load Balancing, Caching Strategies (Redis, Varnish), API Gateways

DevOps & CI/CD: Docker, Kubernetes, GitHub Actions, Azure DevOps, Jenkins, Automated Deployments, Monitoring & Logging, Prometheus, IaC

AI & Data: LangChain, LangGraph, OpenAI, Hugging Face Transformers, OCR ,ETL Pipeline, scikit-learn

Programming & Backend: Python, Java, GO ,Node.js, C#, TypeScript, JavaScript, Node.js (Express, NestJS), Python (FastAPI, Django), .NET (ASP.NET Core), Java Spring, Laravel, Authentication(OAuth, JWT),Entity Framework

Database & Data: Microsoft SQL Server, MySQL, PostgreSQL, Oracle Database, T-SQL, Cloud FireStore, Oracle ,NoSQL ,Azure Cosmos DB, Query Optimization, Vector DB, NoSQL, Redis , Snowflake

Frontend Technologies: React, React Native ,Redux , Next.js, TypeScript, Angular, Vue.js, Svelte, Tailwind CSS, Material UI, SPA/PWA, Responsive Design, GSAP, Three.js, Howler.js,D3.js,Chart.js

Testing & QA: Automated Testing (Playwright, Selenium), Unit/Integration/E2E Testing, Regression Testing

Collaboration & Leadership: Agile, Jira, Trello, GitHub/GitLab, Mentorship, Architectural Reviews

Certification

Certified ScrumMaster (CSM)

Google Cloud Engineering, Baseline Infrastructure, Data, ML & AI

Microsoft Certified: Azure Data Fundamentals

Microsoft Certified: Security, Compliance, and Identity Fundamentals

Microsoft Certified: Azure AI Fundamentals

Microsoft Certified: Azure AI Engineer Associate

Microsoft Certified: Azure Fundamentals