Mark Mitchell

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Summary

I have over 20 years of Java programming and application development experience across various industries including fintech, telecommunications, and hospitality. I possess practical, hands-on expertise in executing and architecting the modernization of legacy systems, including migration to cloud-native architectures such as microservices. I have strong DevOps skills ranging from cloud infrastructure deployment automation to CI/CD pipeline configuration, with particular focus on AWS environments. During the initial 10 years of my career, I specialized as a full-stack developer, implementing robust middleware and creating feature-rich UIs. Currently, I'm expanding my expertise by integrating AI and machine learning into my technical toolkit to enhance and optimize the systems I build.

Technical Expertise

Core Technologies

- Java (Spring Boot, Spring Security, Spring Cloud, Hibernate)
- API Development (REST, GraphQL, OAuth 2.0, JWT)
- JavaScript/TypeScript (React, Angular, Vue.js, ES6+)
- Database Technologies (SQL, NoSQL, MongoDB, Oracle)

Cloud & DevOps

- AWS (ECS, S3, SQS, Lambda, AppConfig, Cognito, todo - update me)
- Containerization (Docker, Kubernetes, Minikube, Helm)
- Infrastructure as Code (Terraform, Terragrunt)
- CI/CD (Jenkins, GitHub Actions, GitLab CI)

Architecture & Methodologies (todo- update)

- Microservices Design Patterns
- Event-Driven Architecture
- Agile/Scrum, Test-Driven Development
- Legacy System Migration

Professional Experience

Principal Engineer (Contract)   **Oct 2023 – Nov 2024**

Financefair
Fintech platform enabling SMEs to access working capital through invoice trading.

Role & Responsibilities:

- Lead technical architecture and infrastructure modernisation initiatives
- Build and mentor engineering team with appropriate skillsets
- Implement observability solutions and monitoring systems
- Design and deploy secure cloud infrastructure using AWS services

Key Achievements:

- Diagnosed and resolved critical system stability issues by optimizing JVM memory settings, eliminating production crashes
- Implemented comprehensive observability solution using Datadog with custom alarms and dashboards, reducing incident response time by 80%
- Completely rebuilt infrastructure using Terraform, Terragrunt, and GitHub Actions, improving deployment consistency and reducing maintenance overhead
- Enhanced security posture by migrating all services and databases to private subnets and implementing AWS Session Manager, eliminating SSH access vulnerabilities
- Orchestrated migration from EC2/Docker to AWS ECS, improving scalability and reducing infrastructure costs by 40%
- Built and trained a high-performing engineering team, establishing best practices for modern cloud-native development

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Senior Software Developer (Contract)   **Aug 2021 – Apr 2023**

Workhuman (Integrations Team)
Workhuman provide recognition software to companies enabling employees to recognise and reward each other.

Role:

- Development and maintenance of customer facing APIs and associated security concerns
- Identify process/pipeline/cycle inefficiencies across team & squads
- Provide technical training and advice to squads as part of the integration's teams modernisation drive

Key Projects:

- Security modernisation for public facing APIs
- Kubernetes sandbox development environment using Minikube, Helm and Skaffold
- Technical training in the form of POCs, detailed documentation, presentations, and recorded videos. Sessions included:
  - Deploying services to AWS ECS (Spring Boot and Terraform)
  - Service security (Spring Security, Ping Federate and AWS Cognito)
  - Various microservice patterns (e.g. Gateway Pattern, Event Driven, etc.)
  - Deploying code with feature flags (AWS AppConfig)

Senior Software Developer (Contract)   **Sept 2020 – Aug 2021**

LexisNexis Risk Solutions (Telematics Team)
LexisNexis Risk Telematics provide analytic solutions to car insurance companies using event data provided by automakers.

Role:

- Backend developer responsible for the architecture, development and deployment of Spring Boot based microservices.

- Writing Terraform infrastructure modules & designing AWS deployment pipelines
- Unit, Integrations & BDD Tests using LocalStack.
- Provide technical mentorship to team members.

Key Projects:

- The primary project was developing a set of services responsible for enriching Connected Car event data with Personal identifiable information.
- Services were implemented using Spring Boot & Spring Cloud.
- Data read from encrypted AWS S3 bucket, new data events published to AWS SQS. BDD Tests implemented leveraging LocalStack (AWS docker based emulator).
- Various DevOps related tasks…
  - Write supporting Terraform Modules
  - Resources deployed to AWS using Terragrunt & Terraform via GitLab pipelines
  - Services deployed to AWS Fargate.
  - Continuous Deployment PoC using Github Actions & jFrog

Head of Technology (Contract)   **Sept 2017 - Jan 2020**

Invoicefair
InvoiceFair is a company that enables SMEs to sell invoices to investors using a bespoke trading platform. They have traded over €1.5 billion through the platform and won Most Disruptive Fintech Award at 2019 Deloitte Financial Services Innovation Awards.

Role:

- Backend developer responsible for the migration of a legacy system to a microservice architecture.
- Prototyping and development of new features.
- Evaluating emerging software technologies and frameworks.
- Provide technical mentorship to team members.
- Identify and address life cycle or process related inefficiencies.

Key Projects:

- The primary project was the migration of a legacy .NET Monolith to a microservice architecture. My tasks included…
- Prototyping various architectures and microservice configurations
- Securing front (Angular) and backend (Spring Boot) microservices using Springs OAuth 2.0 platform security and Netflix's Zuul router.
- Migrations of .NET services to Spring Boot based REST services.
- Full rewrite of the platforms internal banking API functionality (Spring Boot, SQL server)
- Various external API integrations e.g. Experian Financial reports (WSDL), MoneyCorp banking (REST), Slack (Webhooks)
- Various DevOps related tasks…
  - Configured environment Infrastructure deployments (Terraform and Chef)
  - Setup CI/CD tooling using Jenkins pipelines on a Kubernetes cluster.
  - Creation of a remote developer sandbox leveraging Eclipse Che, allowing developers to spin up fully emulated personal development/debugging environments in minutes, without the need to locally install many programs, frameworks and tools.

Senior Software Developer (Contract)   **Mar 2013 – June 2017**

The Now Factory (an IBM company)
The Now Factory provides analytics software that helps communications service providers gain real-time insights into their customers by analysing massive quantities of network and business data. It was acquired by IBM in 2014.

Role:

- Applications Team member responsible for developing next generation middleware
- Writing unit tests
- Develop proof of concept products/features utilising latest technologies
- Debug and solve customer issues
- Code reviews
- Participate in scrum development process (planning, estimates, etc.)

Key Projects:

- Developed a data loading CLI module responsible for distributing and loading potentially 100s of millions of records from text files into potentially 80 separate Oracle database instances. A key requirement was high speed loading. Implemented using Java, Spring Batch and SQL Loader.
- Proof of concept next generation data analytics UI. Developed using latest ES6 JavaScript features, NodeJS, Yarn, NMP, React, Redux and many other libraries.

Senior Software Developer   **Jul 2008 – Feb 2013**

Wedo Technologies
Wedo Technologies provide Revenue Assurance products to communications service providers, which assist in eliminating revenue leakage by reconciling network consumption and billing system information.

Role:

- Full stack development role.
- Writing unit tests
- Debugging and fixing code bugs

Key Projects:

- Responsible for developing the backend of a data analytics application written in Java using Spring, REST, JMS, Presto & Hive.
- Developed various features including a formula parser and validation service which involved parsing and validating a grammar and providing detailed feedback to client (that could be used in UI to highlight lexical errors & provide content assist). Implemented using Spring and ANTLR.
- Implemented various features for a data analytics Portlet application container. For example, a configurable charting dashboard using technologies such as jQuery, Highcharts, Struts MVC, Spring services, Velocity, Hibernate, Oracle.
- Expression builder component using jQuery and CodeMirror UI backed by Struts MVC and Spring services

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Software Developer   **Jan 2001 – Sep 2006**

In1Solutions
Provider of Hotel Booking Engine Technology.

Role:

- Responsible for the development of a product called Hotel In1
- Designing and managing the database, writing PL/SQL maintenance scripts, optimising performance, etc.
- Liaising with the Hoteliers system vendor to capture requirements and identify integration issues
- Debugging and fixing code bugs

Key Projects:

- Developed a Hotel booking engine which is used by hundreds of hoteliers worldwide. Implemented using a Flash based UI, Java & EJB middleware. Backed by an Oracle database.
- Integrated the booking engine with several hotelier's in-house property management systems using various Web Service technologies (SOAP, REST, JAXB, XMLBeans, Axis)

Education

Certifications

- Sun Certified Programmer (Java 5.0)

Athlone Institute of Technology

- H. Dip in Computing (1999-2000)
- B. Eng Polymer Engineering (1995-1999)