Christopher Smith

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Senior Software Engineer with over 11 years of experience developing applications used by millions. Passionate about automation and delivering high-quality, well-tested solutions. Leverages AI/LLM tooling to enhance productivity and code quality.

Skills

- **Advanced:** Java (Spring framework, Spring Boot, Hibernate, Maven), AWS (VPC, EC2, RDS, S3, DynamoDB, SQS, SNS), Terraform, Networking, TDD (JUnit5, Mockito), BDD (Cucumber, Gherkin, TestContainers), CI (GitHub Actions, Jenkins), REST API Design, System Design, DevOps methodology, OOP paradigm, Agile SDLC
- **Proficient:** Kotlin, Kubernetes, DevSecOps, Linux, SQL, Elasticsearch, Git, Containerization (Docker), Observability (ELK, Prometheus, Splunk, New Relic), AI/LLM Integration, GraphQL (DGS), reactive and functional programming paradigms (Java 8, Kotlin, Vert.X, RxJava), Pair Programming
- **Working Knowledge:** JavaScript (AngularJS, Node.js), Python, Bash, Helm, Istio, Groovy

Experience

Sainsburys - DevOps Java Engineer   *London, UK - Oct 2022 to Apr 2025*

- Platform migration project: Led migration of 30 microservices between two Internal Developer Platforms (IDP) based on Kubernetes
- Migration benefits: The IDP being migrated from was decommissioned and saved the company $50,000 a year in
- AWS costs. 2 senior engineers saved hundreds of working hours a year
- Continuous Integration/Deployment migration: Led the CI / CD transformation from Jenkins to GitHub
- Actions, reducing the code line count by 80%
- Upgraded Primary Order Database: I planned and implemented an upgrade from AWS Aurorav 2 (MySQL5) to v3 (MySQL8) the 'Master of Record' database for customer orders. Using a blue/green deployment strategy meant there was no downtime, nor data loss/corruption

  Tech: Java, Spring Boot, TDD, Hibernate, MySQL, AWS (SQS, SNS, Step Functions, Lambdas, DynamoDb, VPC, IAM, S3, RDS), Kubernetes (Helm, Istio), GitHub Actions, Docker, Jenkins, Python, Javascript

Ford UK - Full stack engineer   *London, UK - Aug 2021 to Sep 2022*

- Refactoring as part of the feature development: Advocated for clean code, refactoring while developing features to decrease tech debt incrementally
- Convinced the team and worked alongside another engineer to implement a GraphQL API alongside the current RESTful API

  Tech: Java, Spring Boot, TDD, API Design, GraphQL (DGS), Hibernate

Career break – *Caring for family members*   *Manchester, UK - Sep 2020 to Aug 2021*

Sky - Senior Software Engineer   *London, UK - Mar 2020 to Sep 2020*

- TDD and pair programming microservices written in Kotlin
- Decreased latencies by 80% and resource usage by 50% compared to legacy services that used Java TomCat

  Tech: Kotlin (Ktor), Gradle, GraphQL, SQL, Docker

Royal Bank of Scotland - Software Engineer   *London, UK - Sep 2018 to Feb 2020*

- Ownership over microservices: Led the design and implementation of microservices that secured 6 million customer transactions per day Achieved a 90% decrease in response time for a set of endpoints
- Minimised duplication by using common libraries, reducing total lines of code by 75%
- Used Python for various operational tasks - data migration, data parsing
- Designed and implemented Event Driven Java frameworks: Decreased resource consumption by 50% by using http microservices based on Vert.x

  Tech: Java, Python, Spring Boot, AWS Elasticache (Redis) and DynamoDB, VertX, Terraform, REST APIs, OAuth, Swagger, Public Key Cryptography

Sky - Software Engineer
London, UK - Nov 2017 to Sep 2018

- Implemented microservice features using TDD and pair programming
- Designed the system to be distributed and event driven so that it remained performant despite 10x spikes in traffic throughout the day (scalability)

Tech: Java (Spring Boot, RxJava), Kafka, Websockets, Python, Kubernetes

Amalytics Ltd - Full stack Software/DevOps Engineer
London, UK - Mar 2016 to Nov 2017

- A small startup of 3-5 engineers: A single MVP was being developed that ingested accountancy data
- FinOps Role: Reduced AWS costs by 75% by scheduling pausing or otherwise disabling services not in use
- DevOps Role: Designed and implemented a single Jenkins node for CI
- Front-end developer:
- Performance Tuning: Used JVM profiling tools such as JMeter and Java Flight Recorder to reduce computation time by 95% (caused by frequent GC). Remedies were to prefer primitives over Objects, reuse of Objects via Object pooling, not using libraries that result in the heap growth

Tech: Java, Javascript (node.js, AngularJS), Python, Elasticsearch, SQL, Docker, Jenkins

British Airways - Junior Full stack Software Engineer
London, UK - Mar 2014 to Mar 2016

- Implemented an Elasticsearch Logstash Kibana (ELK) stack
- Designed failover architecture: Two identical stacks in 2 different data centres - both functioned independently and had a hot/cold configuration - all traffic went to a single stack unless of failover
- Implemented widgets and features using AngularJS, Java and Redis

Tech: Java, Spring, Redis, Javascript (AngularJS), HTML, CSS

Education & Certification

- **Oracle Certified Professional Java SE 8 Programmer** *ID:OC1671391, 2017*
  Core Java SE 8 — Streams API — Concurrency — JDBC — Java NIO.2 API

- **AWS Certified Solution Architect - Associate (Expired - Renewal Planned)** *2016*

  EC2, EBS, VPC Design (multi-AZ VPCs, subnetting, route tables, peering, security groups, ACLs, IGW, NAT), Route53, S3, Redshift, DynamoDb, RDS, ElastiCache, SQS, SNS, Kinesis, IAM, CloudWatch, CloudFront

- **Java Developer training programme** *FDM, London, Nov 2012 to Mar 2014*

- **Master of Pharmacy** (2:2) *University of Portsmouth, 2009*

In Progress

- **AWS Certified Advanced Networking - Specialty** *Exam scheduled 09/2025*

  Networking fundamentals: OSI 7 layer model, Ethernet, ARP, DHCP, IP, BGP, TCP/UDP, NAT, TLS, DNS, SECDNS, VLAN, VPN, IPSec

  AWS services: CloudFront, Global Accelerator, Route53, Load balancing (ALB, NLB), API Gateway, ACM, EKS, VPC Peering, Transit Gateway, Direct Connect, PrivateLink, Network Firewall, Hybrid networking

Additional Professional Development

Kotlin for Java Developers	*Coursera, 2020*
Distributed Systems	*Udemy, 2019*
Docker Mastery & AWS Serverless	*Udemy, 2017*
Machine Learning Fundamentals	*Udemy, 2015*
Databases SQL and noSQL	*edX, 2013*
Introduction to Algorithms I and II	*edX, 2013*
Artificial Intelligence 101	*edX, 2013*
Introduction to Computer Science and Programming in Python	*edX, 2013*

Professional Methodologies

For detailed information on my applied principles in Testing, DevOps, and System Design, please visit:

GitHub: [Testing | DevOps | DevSecOps | System Design]