



Profile

I am a highly experienced principal engineer and tech lead with over fifteen years building high available, distributed application architectures. I am accomplished at leading a team of developers ensuring the best coding practices are followed.

I have a wealth of experience across the SDLC. I specialise in Golang and Java development, but consider myself a polyglot, and am expert in a wide range of languages and technologies.

- SOLID/Clean developer
- Golang, Java, Kotlin, Typescript and Python API Applications
- Scala and Python Spark applications
- gRPC microservice architectures
- REST and federated GraphQL APIs
- React and Redux UIs
- Event and Data Streaming with Kafka, RabbitMQ, Google PubSub
- MongoDB, Firestore and multiple relational SQL databases
- Lucene Search technologies such as Elasticsearch
- Infrastructure as code/containerisation. Terraform, Helm and Kubernetes
- Experience with all major cloud providers. AWS, GCP and Azure

Skills

Java	●●●●●●	Python	●●●●●●	Kubernetes	●●●●●●
Golang	●●●●●●	Typescript	●●●●●●	Terraform	●●●●●●
MongoDB	●●●●●●	Scala	●●●●●●	Helm	●●●●●●
Spring Boot	●●●●●●	Docker	●●●●●●	Kotlin	●●●●●●
Spring Data	●●●●●●	Gitlab CI/CD	●●●●●●	React	●●●●●●
Spark	●●●●●●	Elasticsearch	●●●●●●	Redux	●●●●●●
Git	●●●●●●	AWS	●●●●●●	Kafka	●●●●●●
SQL	●●●●●●	GCP	●●●●●●	Cassandra	●●●●●●

Employment

Aug 2022 Present ● Marco Polo Network (contract)
Technical Lead, DevOps

Providing technical guidance and leadership to the DevOps team during the development of a platform onboarding solution. Designed and developed the onboarding system, which has helped Marco Polo Network rapidly onboard hundreds of new clients without the need for manual processes.

- Advised the team on coding best practice, and helped introduce more structure to the testing of GoLang build pipelines
- Developed user onboarding application, built on Palantir Foundry
- Developed multiple serverless API using GoLang, Firestore, Google PubSub
- Automated the creation of infrastructure required for the onboarding platform with Terraform
- Automate the instantiation of client platforms across multiple clouds, with Helm and Kubernetes
- Designed and developed internal onboarding administration application with Typescript React FE, Golang BE and Azure DevOps build pipelines

Aug 2022
Sep 2022

● Black Swan (contract)
Technical Consultant

Short term contract to design and develop a solution providing additional data streaming capabilities to Black Swan's platform. The solution developed allows Black Swan's platform to provide deeper insights in the datasets it provides to clients.

- Ingest a "firehose" stream of data from reddit. Using Java Spring Boot microservices and Kafka.
- Develop Apache Spark jobs running on the Databricks platform, to ensure data compliance with Reddit's compliance data stream
- Migrate existing reddit data streams to use the firehose stream.
- Ensure all streams are properly monitored and alert. Using Prometheus and Grafana

Nov 2021
Aug 2022

● Curve
Technical Lead

Technical Lead across multiple squads within the "Core Product" group. Ensure all code developed is "clean", maintainable and scalable. Directly manage all engineers within the "Churn Reduction" squad. I have quickly become the domain expert for multiple domains within Curve. I design, develop and document solutions within Curves architecture, collaborate with technical leads from other groups and investigate and solve issues within the platform.

- Golang microservices, Communicating via gRPC, RabbitMQ or kafka
- Implement Kubernetes Helm charts for highly available services, deployed within AWS
- Develop federated GraphQL services for use by internal, iOS and android applications
- Manage legacy PHP services, and extract business logic into Golang
- Develop Postgres, MongoDB and Elasticsearch datastores
- Manage and develop Curve's OAuth Identity management services. Improving passwordless login flow and passcode management.
- Quickly designed and implemented a solution to "SMS Pumping" fraud, saving the company tens of thousands USD per month
- Diagnose and fix High CPU issues across the microservice estate, which drastically reduced the amount of resources used
- Help other teams to understand, and hotfix, production issues quickly
- Drove an initiative to reduce technical debt and push for multiple "paper cut" improvements. Reducing customer Churn by 7%
- Manage technical relationships with multiple third parties
- Drive a culture of continuous improvement within the core product group, follow the "boy scout" rule, leaving code in a better state than you found it
- Help disseminate knowledge to the wider engineering group by presenting at group meetings and documenting all investigations

Jun 2017
Nov 2021

● Black Swan Data

Lead Technical Architect (Interim VP Engineering between Sep 2019 and Mar 2020)

Led all architectural improvements to the platform. Directly line managing all lead developers to ensure consistent coding standards were adhered to. As part of Black Swans Leadership team I was responsible for ensuring the Engineering department delivers high quality, testable and maintainable code in a timely manner. I helped drive the product roadmap and constantly looked for improvements to our platform.

- Migrated all, Java Spring Boot, on prem applications to AWS cloud based solution
- Migrated from RabbitMQ to Apache Kafka
- Developed Identity management system using Keycloak SSO. Migrated existing user data and integrated with multiple external identity providers (SAML/OpenID Connect)
- Ingest up to 16,000 events per second
- Ingest, process and store over 10% of Twitter's data
- Designed and implemented a pipeline management tool for running Apache spark jobs on EMR and Databricks
- Developed Apache Spark Jobs to process large amounts of data
- Architected and developed data compliance solution to keep immutable Parquet Data stored on AWS S3 compliant with GDPR
- Introduced federated GraphQL API access to our data stores
- Introduced code standardisation and code quality using sonarqube
- Improved our CI/CD process, moving away from Jenkins and into gitlab
- Standardised our front end application frameworks to use React and Redux
- Containerised the platform using Docker and Docker Swarm
- Migrated all applications from Docker Swarm to Kubernetes

Oct 2015
Jun 2017

● Black Swan Data

Senior Technical Architect

Led the re-architecting of Black Swans social listening platform to event driven microservices. Introduced a number of new technologies to handle the amount of data passing through the platform. Architected solutions to allow hybrid on prem and cloud based deployments of platform components for high profile clients, including Disney, Samsung and Pepsico.

- Architected and developed a distributed data store using Apache Cassandra and Elasticsearch
- Developed a high availability Elasticsearch cluster containing over 6 billion tweets and 10TB of data
- Designed and developed a document ingestion and indexing system using Elasticsearch Percolator, RabbitMQ and Java microservices.
- Designed and developed a document enrichment process using ML models
- Developed a query language for all applications using ANTLR
- Introduced Spring Boot framework for Java microservice development

Jul 2013
Oct 2015

● Velti / MGage / Black Swan Data

Principal Software Developer

Worked across the full SDLC to implement web and mobile applications for high profile clients, PepsiCo and O2. Met with clients to gather requirements, Architected, developed and tested high availability and horizontally scalable cloud based solutions to handle high user load. Mentored junior developers in best practice development.

- Worked on “Walkers, Gary’s great ingredient hunt” competition
- Lead the development of “Walkers do us a flavour” competition
- Worked on “O2 academy” mobile app for windows mobile, C#
- Introduced improved security standards for customer data
- Developed high availability Java web applications
- Architected AWS infrastructure for applications
- Developed Java/C++ JNI interface for opencv
- Managed AWS RDS MySQL services for application data.

Apr 2013
Jul 2013

● The AI Corporation
Senior Java Developer

Responsible for designing, implementing, documenting and testing code developed in a variety of programming languages. In my short time at the company I was able to introduce basic coding standards, logging frameworks, dependency management and major performance improvements.

- Lead developer in a team of 4 Java developers
- Introduced major performance improvements
- Introduced and mentored team in best practice coding standards
- Started to introduce dependency management using maven
- Developed Java web services
- Developed Java windows services
- Developed C# GUI applications
- Developed Visual Basic applications
- Developed MSSQL stored procedures
- Found, and fixed, memory leaks
- Trained other developers about JVM garbage collection

Jan 2008
Apr 2013

● Flybe
Senior Software Engineer (technical team lead)

At Flybe I was technical team lead of the software development team. I was responsible for reviewing the design decisions and code of the other members in the team as well as taking on development tasks of my own. I have proven myself on many occasions to be a fast and reliable developer who is able to learn an area of code quickly and design and implement a solution to the problem.

- Development team lead for 7 permanent and 2 contractors
- Project lead of 3-4 developers for the design, development and unit testing of improvements to Flybe's core customer facing website
- Trained and mentored new developers
- Provide accurate development estimates from business requirements
- Design solutions to fit into the current service-oriented architecture.
- Develop IBM Message Broker services (ESQL)
- Develop MVC web applications (Spring, Struts 2 and Hibernate)
- Develop web services (JAXB, JAX-WS, JAX-RS)
- Develop touch screen GUI applications for Check-In Kiosks (Swing, JBPM).
- Develop Oracle PL-SQL procedures
- Develop Zeus Traffic Management scripts
- Load test and profile applications (Proxy Sniffer, YourKit)
- Tune garbage collection and deploy applications to JBoss and Tomcat
- Proven to be a fast and reliable developer under pressure
- Installation and administration of various third party tools and applications

- Jul 2006
Jan 2008
- NHS Connecting For Health
Junior Software Engineer
 - Development of web applications for Primary Care Trusts
 - Full development lifecycle.
 - HTML, CSS and Javascript frontend
 - Java web applications running on Tomcat 5.5
 - Oracle SQL Database including PL/SQL stored procedures
 - Verbal and written communication with customers to resolve new and outstanding issues
 - Collected internal and external feedback to drive new application enhancements
- Jul 2005
Sep 2005
Jul 2004
Sep 2004
Jul 2002
Sep 2003
- DSTL (This job required me to have "Security Check" (SC) clearance)
Year In Industry Scheme and Vacation Placements
 - - UNIX, VMS and NT Network Administration and Support on a secret network.
 - Software development in Visual Basic and Java.
 - Web development using HTML, CSS, XML, XSLT and Javascript
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Education

- Sep 2003
Jul 2006
- The University of Exeter.
Internet Engineering BSc awarded July 2006, Grade: 2:1
- Sep 2000
Jul 2002
- The Gryphon School Sherborne.
3 A Levels – Maths, Physics, Chemistry 1 AS Level - ICT
- Sep 1997
Jul 2000
- Sherborne School for Boys.
9 GCSEs – 3A, 3A, 1B, 2C*