

Objective

Throughout my career I have built and lead technical divisions that have delivered pioneering solutions in the field of Distributed Systems, Big Data Engineering & Analytics and Mobile platforms. I was amongst the **first 100 employees of BlackBerry** when it started in the UK and I built its Mobile and Data platforms laying foundation fuelling its growth to claim #1 mobile vendor of the world in 2010. I laid the foundation and built the **first Big Data Platform for Barclays Investment Bank** transferring data from myriad relational database technologies to a single central data lake that delivered regulatory compliant reports in multiple jurisdictions amid tight SLAs. I built the **analytics platform for Macquarie in the cloud using AWS** that could store and process vast weather, gas & energy, oil and regulatory compliance datasets. I am currently tackling Data processing challenges at HSBC's investment bank dealing with ETFs, derivatives etc. datasets.

I have experience building & leading divisions spanning continents. I have driven best software engineering practices following agile methodology across all the teams that I have led. I have worked with Business and Sales teams working towards solutions that can derive additional revenue for the organization. I look forward to discuss the software & data engineering strategy of your organization and making it a success through my technical skills and experience.

Education

- **University of Warwick - Warwick Business School** Coventry, UK
Master of Business Administration Jan. 2010 – Jul. 2013
- **University of Madras** Chennai, India
Bachelor of Engineering with specialization in Electronics and Communications Jun 1996 – April 2000

Professional Experience

- **HSBC - Global Banking and Markets** London, UK
Head of Data Engineering Jan 2020 – Present
 - Leading a multi-million re-engineering effort to stream line Ingestion, ETL and data presentation processes that are efficient, can run in hybrid (cloud & on-premise) infrastructures and meet the SLAs.
 - Leading a multi-million Cloud migration of data and processing from on-premise to GCP & AWS.
 - Working hands-on with the various development teams using **Big Data Frameworks - Spark, Kafka** and using programming languages **Scala & Python**.
 - Translating legacy Logical Data Models to Physical Data Models for various Big Data Technologies ranging from SQL to NoSQL.
 - Design data pipelines that transform and enrich the data through entity resolution to deliver rich consumable datasets that deliver value through new revenue generation for the business.
 - Leading Data Governance Initiative by defining data security policies and standards to support cross regional groups across various jurisdictions.
- **Macquarie Investment Bank** London, UK
Senior Manager Nov 2018 – Dec 2019
 - Leading the development of Scala/Java & Python APIs enabling developers to build data pipelines independent of the underlying platform.
 - Leading development of applications in Scala to ingest real time tick data from various providers like Refinitiv, Bloomberg, FactSet.
 - Establish Software Development Practices - Testing Strategy (TDD & BDD), CI/CD, Code coverage.
 - Building Big Data platform for Investment Bank that is Cloud agnostic and works seamlessly with leading Cloud platforms - **AWS & GCP (Google Cloud Platform)**
 - Driving the vision to build a centralised data lake for the entire organisation to serve as single source for Data Warehouse and BI reporting.
 - Building a Streaming Platform Using **Kafka** that will be the central nervous system of the entire Investment Bank.
 - Building cross functional teams with expertise in Software Engineering, Data Engineering, Data Science and Visualization.
 - Liaising with Business teams and Quant teams spread across the globe to design robust applications that meet regulatory SLA targets using Scala, Python & Java.
 - Build strategies for utilising data to drive operational efficiencies, derive new revenue generation streams and making the organisation data driven.
- **Barclays** Canary Wharf, UK
Head of Big Data Software & Platform (Contract) - Barclays Investment Bank Jan 2017 – Oct 2018

- I have defined end to end processes to run workflows that ingest data from external providers like Bloomberg and ensured that data is available to downstream applications seamlessly.
- I have built, lead and scaled Software & Data Engineering teams across continents (India, Czech Republic, UK and USA) building Data Warehousing capability using Big Data to handle structured data from various relational databases.
- Introduced & Implemented Functional Programming for various projects in the Investment Bank using Scala as the main vehicle. Built Scala wrappers over legacy Java Libraries to achieve concise & fluent code and intelligible error handling.
- Introduced and Led implementation of CI/CD strategies ensuring zero manual intervention in deployment of various applications.
- I have solely driven the vision for data warehousing and BI using Big Data making it possible to off load data from disparate data sources into a single data lake that serves as a central nervous system for all Financial Regulatory SLA critical reporting.
- I have designed & built robust, scalable on-premise Big Data infrastructure from scratch for Barclays Investment Bank.
- I have built cross functional data visualization teams specialising in QlikView, Tableau to build business critical dashboards driving operational efficiencies.
- I have built cross functional Data Science teams to build solutions that tackle Financial Fraud, derive insights about dynamic Investment Banking environment using market data from sources like Bloomberg, Refinitiv, Trayport etc.
- I have defined roadmaps of the products to align with business requirements.
- I have used my hands-on technical skills to build POCs to demonstrate solutions & their contribution towards increase of revenue streams to the business.

- **QuantumBlack - McKinsey & Company**

London, UK

Principal Data Engineer

Jul 2016 – Dec 2016

- Involved in setup and deployment of QuantumBlack Data Platform on AWS.
- Assisted Data Science team in migrating R code to Spark.

- **Barclays**

Canary Wharf, UK

Big Data Lead - Consultant, Investment Banking

Aug 2014 – Jun 2016

- Setup Hadoop Cluster based on Cloudera distribution → implementing security - SSL, HDFS & Linux encryption inline with regulatory requirements.
- Have built and deployed business live applications to the production cluster using - HDFS, Hive, HBase, Spark, Yarn & Zookeeper.
- Designed & Implemented ingestion of several data feeds from messaging systems like Solace, JMS to Kafka with a view to provide a centralized messaging system. Data is ingested into HDFS by various downward streams.
- Defined the file formats and connection mechanisms to ingest data into Hadoop.
- Modeled data for low latency query response.
- Implemented ETL using Spark.

- **BlackBerry**

Slough, UK

Manager, Interoperability Engineering

Nov. 2005 – May 2014

- Worked on BlackBerry's platforms like BlackBerry Messenger (BBM), BlackBerry News and BlackBerry Traffic as a part of Platform Analytics Engineering Team to deliver context based value to Customers, Product Development teams in BlackBerry and BlackBerry App Developers.
- Responsible for collecting requirements from various departments like Product Development teams & Marketing teams and translating them into feasibility document leading upto detailed design document with all implementation details.
- Built Data Mart for Mobile Logs Analysis and Analysing Consumer Behaviour.
- Have debugged problems with MapReduce applications and performed unit testing of MapReduce applications
- Have interfaced with carriers/vendors/partners/customers as and when required presenting analytics cases regarding the potential launch of BlackBerry handsets and applications in particular geographical areas
- Working with the team in an Agile Environment

- **Philips Semiconductors**

Bangalore, India

Technical Lead, Videotelephony Group

Oct. 2004 – Oct. 2005

- Developed ITU-T H.245, H.223 compliant interface over third party stack for Philips Video Telephony Product using C++.
- Validated the product with other vendors in Video Telephony Forums and helped make it a commercial success.

- **Samsung Electronics**

Bangalore, India

Senior Software Engineer

Jul. 2003 – Aug. 2004

- Helped Samsung launch their first 3G mobile phone in Spain
- Was responsible for fixing issues with the third party Qualcomm 3G Protocol Stack that was written in C. Provided fixes for the issues found in the field to expedite product delivery to customers

- **Sasken Communication Technologies Ltd.**

Bangalore, India

Software Engineer

Oct. 2000 – Jun. 2003

- Ported the Protocol Stack Abstract Operating System Interface to various Operating System interfaces of customers like [Intel](#), [Philips](#) & [Analog Devices](#) in C.
- Involved in training customers on various Protocols of the 3G Protocol Stack