Arun Manivannan

BigData | Distributed systems | 7 years in data

Hands-on big data architect and lead with experience building high-throughput and low-latency data and backend systems for Fintech, Banks and Government agencies.

Location: Singapore
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GitHub: github.com/arunma
Years of experience: 15

EDUCATION

Master of Technology, Software Engineering
National University of Singapore, 2010 - 2013

WORK EXPERIENCE

Grab Digital Bank | Head of Data Engineering
Aug 2021 - Present | Singapore, Indonesia

- **Engineering manager**, Architect and Engineer for Data platform, a bank-wide data integration platform that connects data from upstream core transactional systems with downstream reporting (finance, regulatory reporting, AML, BI, ML and several others). In its pre-public release state, the platform is a multi-terabyte central store used by over 100 users. Ensured that the **SLA target of 99%** is met.
- **Built an internal reconciliation engine** using merkle trees and Rust that can compare upto 1 million records (pair) in less than a minute.
- **Coached and managed a team of 15** spread across Singapore, Malaysia, Indonesia and China for building the Bank's new sub-entities in Indonesia and Malaysia.
- **Co-built the data warehouse models** for the entire bank - the warehouse has over 3000 attributes that covers all aspects of the bank including Treasury. **Ensured that data quality, data definitions and RBACs are captured in the Governance** system across the lifecycle of the data.

ThoughtWorks | Lead Data Consultant
Oct 2018 - Jan 2021 | Singapore, Thailand

- Built the Singapore Government's health data platform on Azure in a span of **8 months** taking into consideration the **complex privacy, security and governance** of data, which are key concerns in storing citizen's health information.
- Designed and built the de-identification toolkit using **Privacy Preserving Record Linkage** (PPRL) techniques based on Bloom Filter. The design was **presented in the Government tech conference.**
- **Trained, prepared content and workshops** for a month-long **data science** 10-student course supported by Infocomm Media Development Authority (IMDA). The course included several topics in Data Science that included several algorithms for **Regression, Classification and Clustering.** The feedback from the trainees was 100% positive.

Standard Chartered Bank | Senior Big Data Architect
Mar 2017 - Jul 2018 | Singapore

- **Built the ingestion, transformation and extraction frameworks** for the datalake that was the home for over **140 systems spread across 43 countries**. The size of the data lake was around **2 Petabytes** and processed 2TBs of data every day.
- Recruited and managed **a team of 20** spread across Chennai and Bangalore.

National University of Singapore | Adjunct Lecturer
Mar 2019 - Feb 2021 | Singapore

- Taught 2 different postgraduate courses - Big Data Engineering and Platform engineering that covers Data engineering, NoSQL databases, service-mesh etc

Singapore Exchange, Bank of America-Merrill Lynch, Credit Suisse, Verizon
Apr 2005 - Feb 2017 | Singapore, Chennai

- Built the OTC-Trading platform and several other low-latency backend systems.

SKILLS

Programming Languages
- Proficient in: Scala, Python, Rust, Java, SQL
- Working knowledge of: Kotlin, Go

Technologies
Spark, Airflow, NiFi, DBT, Hadoop (Hive,HDFS,YARN), Snowflake, AWS & Azure data stack (EMR, HDP), Kafka, Kubernetes, Terraform, sklearn

AWARDS AND ACCOLADES

- Author - Scala Data Analysis Cookbook and Scala: Guide for Data Science Professionals
- Featured in InfoQ for a series of blogs on Akka. Published several times on Developer Zone and JavaCodeGeeks.