



VISHAAL SELVARAJ

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Skills

Rust, C++, Java, Python, Golang, Scala, Dart, JavaScript, OpenCL, Bash, Tensorflow, React, Flutter

Cloud, Azure, Kubernetes, Docker, Linux, Networking, GPGPU, Backend, System Design, Distributed Systems, Frontend, Big Data, Algorithms

Communication, Debugging, Team player

Education

B. Tech Computer Science and Engineering / Graduated @ July 2022

Graduated with a 9.03 GPA from Vellore Institute of Technology.

Experience (2y+)

Microsoft

Software Engineer - II / September 2024 – Current

- **I am driving** the design and development of materialized views within the Spark query engine for Microsoft Fabric, significantly enhancing performance in medallion architecture-based pipelines. **This key feature** is critical for Microsoft Fabric to compete effectively with its competitors, providing a more robust solution for high-performance data processing.

Software Engineer - I / July 2022 – September 2024

- **I engineered** the support for inplace upgrades in Azure HDInsight on AKS, a unique and competitive feature for any big data PaaS in the market. This capability enabled customers to seamlessly integrate the latest open-source features and fixes into their big data clusters with minimal workload disruption. **As a result**, many **high-revenue enterprise customers (~2 million USD potential revenue)** were unblocked during onboarding, allowing them to receive critical updates in a managed and efficient manner.

- **I designed and implemented** zone-aware scheduling for Kafka brokers by developing a custom Kubernetes scheduler. This feature was a critical requirement for many **key enterprise customers** seeking to use Kafka in HDInsight on AKS.

This enabled the onboarding of these key customers by allowing them to create Kafka clusters with zone-resiliency, enhancing the platform's reliability and appeal.

- **I wrote several key platform components**, including cluster provisioning and gateways, for HDInsight on AKS clusters. These components are crucial to the platform's infrastructure and are expected to meet high reliability standards.

I ensured these core components achieved a **99.9% reliability** metric, reinforcing the platform's stability and performance.

- **I designed and implemented** end-to-end provisioning for Ranger clusters in HDInsight on AKS, which play a crucial role in establishing governance for other cluster types such as Trino and Kafka. This feature enabled customers to define row-level policies, topic restrictions, and more, meeting their governance needs.

This helped to onboard numerous enterprise customers to the platform by addressing their critical governance requirements.

Software Engineer Intern / Jan 2022 - July 2022

- **I developed** a low-cost alternative serverless scaling infrastructure during my internship and successfully proposed its production deployment when the legacy scaling system crashed. Recognizing this as a critical solution, I presented compelling data from test regions to the leadership team, demonstrating its effectiveness.

This initiative prevented significant customer refund losses during the outage and replaced the outdated infrastructure, **saving approximately 30,000 USD per region per month** in maintenance costs.

SmokeTrees

Full-stack development intern / May 2020 - July 2020

- **Worked on** building a digital marketplace using Flutter, FastAPI and PostgreSQL for BearLyfe, a Hong Kong based organization that helps users improve their wellbeing.
- **Built** a salon booking app using Flutter, FastAPI, Firestore and Razorpay for fabsalons, an India based startup that allows users to book salon facilities from their home.