



Shiv Prakash

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#Backend, #DataEngineering, #Data Platforms, #MLOps, #Cloud, #Ops, #Compliances, #Governance

Professional Summary - Results-oriented Engineering Leader and hands-on Architect and Technologist with a proven track record of building and leading high-performance teams to deliver critical, advanced, innovative, precise scalable solutions for large-scale businesses. Led and involved in 10 successful Walmart US Holiday sales. Delivered and owned Tier-0 and Tier-1 systems in backend, Data and MLOps, Data Stores and Platforms for time sensitive high impact businesses and requirements.

Skillset Summary

Functional Skills:

Supply Chain Management, Retail, eCommerce, Stores, Replenishment, Demand Forecasting, Demand Allocation, Inventory Placements, Inbound Inventory, Sourcing, Order Management, Inventory Management, Logistics and Returns systems, Refunds, Grocery, Chatbot, Communications, Activation Platforms, Care

Leadership/ Management Skills :

Driving roadmaps and vision planning with cross-geo teams. Drafting concept and whitepapers. Led many cross functional teams, led Geo-distributed teams in India, US, UK, CA & SA. Agile Program management, Product management (briefly).

Technical Skills :

Foundational Algorithms, Data structures, Data modelling, Optimizers, OOAD, Design & Architecture

Backend APIs, Messaging, SOA, Micro-Services, Reactive Services, Service Mesh

Data Stores RDBMS, NoSQL, Cache, Hot, Cold Store, Index, Data Warehouse, Block, Object, Key Value, Search, Operational, Analytics Stores

Data Platform Data Governance, Schema Governance, Registry, Data Catalog, Quality, Ingestion Router, Control Planes, Discovery, Dashboard and Querying

Big Data HDFS, Stream Processing, ETL, Distributed Querying, Query routing, Streaming, Big Data Architecture

MLOps Cleaning, Processing, Model Run & versioning, Time Series,

Ops Continuous Integration, Continuous Deployment, Business Continuity Disaster Recovery, Containers, Orchestrators

Compliance SOX, CCPA, GDPR, POPIA, Secure Code

Infra & Cloud Cloud Native Architecture, OneOps, GCP, Azure, Walmart Pvt Cloud

APIs & Tools Conversations APIs, CDNs, WAF

Experience

October 17,2012 - present Walmart Global Tech

Senior Software Engineering Manager / Software Architect

Aug 2019 - Present

Built and launched Inventory placement solution -

Inventory placements enable \$500 million savings and is a CTO top initiative. Drove realization \$15 million in successful v1 launch for replenishable items. It enables next generation pixel-based demand forecasting and scaling next gen automated FCs.

Having direct report of folks in Dynamic Inventory comprising of Architects, Senior engineers and a Line Managers. Driving roadmap with cross geography collaboration with business, product, executives and program stakeholders.

Platform Cost reduction -

Realized 31% reduction in operating cost for the existing replenishment lake via continuous monitoring of cost, migration, re - architecture, compression and optimization.

Engineering Excellence -

Driving the engineering excellence horizontal for Replenishment. Identified and improved code, agile, incidents and productivity metrics.

Built and launched Centralized Comms platform -

Lead a team of 5 engineers in backend and 8 cross functional team in UX, UI and Mobile. Drove the roadmap for the product with 4ITB stakeholders.

This is now being used in UK, Massmart(SA), CA, MX and India markets. This platform is elastic and scales up to 500k TPS benchmarked. It reduced the operations cost by 21.2% and allowed Walmart to use bulk licenses for multiple comms channels with at least one channel view promise. This has improved CSAT score by 33.83%

Enhanced Integrated chatbot using inhouse conversational APIs

(Reduction in contact rate by 32 %)

Maintained & Enhanced Refund and Self-Service experiences for UK Grocery & SA

(Lead a cross functional team -UX, Web UI, Mobile Apps, Analytics, Big Data and QA, led migration to WCNP stack)

Led the creation of Walmart Stores Data Platform

(Led the design, development, and delivery of automated Data Governance policies and systems, serving 34 domain verticals across stores. Personally contributed to coding and implementation efforts. Established both automated and static Schema Governance, enabling self-service schema onboarding, policy verification, and standardization, reducing onboarding time from 1.5 weeks to 2 days.

Designed and developed a comprehensive Data Catalog and Data Quality framework to manage data lineage, classification, discovery, and quality scoring for ingestion and data lakes. This system reduced data discovery time maintained a clean and healthy data lake and facilitated effective data management and product development.

Languages:

Java, Python, Scala, Shell, R

Frameworks:

Spring, Spring Boot, Spring Reactive, JPA, SOA, REST, CXF, Jersey, JTA, JAX-RS, Apache Commons, Camel, Dozer, MapStruct, Lombok, Scikit learn, Tensorflow

WM Cloud:

CCM (Config Service), OneOps, Grafana, Log, Trace & Alerts, Dynatrace, Splunk, Liquibase, Active MQ, Batch Service, Couchbase, Swift Object Store, Jenkins Based CI- CD, WCNP(GitOps, ChatOps based K8s Framework)

Technologies:

Oracle RDBMS, MySQL, Postgres
Couchbase, Cosmos DB, Cassandra,
Elasticsearch, Kibana, Solr, Hazelcast,

Kafka, JMS, Rabbit MQ

Spark Streaming, HDFS, Hive, Hadoop,
Spark, Spark SQL,

Slack API, Sterling SSFS,

Jboss, Tomcat, HTTP, Docker, Kubernetes,

Airflow, Celery, Hamake, ES-Hadoop,

Apache Atlas

Cloud:

Azure ,
GCP ,
WM Pvt Cloud(Open Stack)

Spearheaded SOX and CCPA compliance certification, architecting and coding necessary changes across the entire store systems data platform. Additionally, developed and implemented a Confluent-compliant Schema Registry, ensuring faster, schema-compliant ingestion into the data lake, with a 99.97% uptime metric. Contributed to a Hot Store, Cold Store, ingestions router, control plane and Query routing layer. Lead cross-geo team in India and US and drove the Roadmap with 4ITB.)

Demand Forecasting Solution - AIMS & Data Platform.

(Built AIMS, the next gen demand forecasting platform. Laid foundation for Functional and technical analytics platform. Made data modular and sharable. On-boarded 2 more customers for our data in Walmart and improved processes. Built a sharable library for ML and Cloud transfers for companywide teams
This solution deprecated erstwhile 5 systems into 1 platform, reduced code bases from 35 repos to 3. Improved developer productivity by 300%. Release time by 500%. It brought in cost savings of 40% increasing throughput by 500%. This was one of the key wins and called out at the IDC Leadership and CTO level.
Lead cross-geo team in India and US and drove the Roadmap with 4ITB.)

AIMS Audit (Building the Audit datastore for timing, windowing, tier 2 timeseries data)

AIMS Learning(Building the new improvised learning data pipeline)

AIMS Analytics and Index Datastore Unlocking the analytics and user search, query and aggregation use cases in Forecasting, Managing a 1 TB ES cluster

Data Engineering & ETL (Managing TB and Billion records, Ingestion, Aggregation and cleaning of Data needed for replenishment and forecasting. Read from Stream and Data lakes. Refreshing > 10TB of delta loads over week and 100GB daily.)

New Item Forecasting – Forecasting for newly launched items.

Forecasting Backend Apps – Rest App for accessing forecasted demand and sales.

Forecasting Monitoring, Alerting & Worker Bot

CI/CD Pipeline for Forecasting Core, ETL & App

SDEII, SDEIII, Senior Software Engineer

October 2012 - August 2019

Data Engineering & ETL – Replenishment, Catalog and Allocation

CI/CD Pipeline for Replenishment Core, ETL & Apps

Workflow App – Order Lifecycle App for Purchase orders- Optimized the performance for the excel parsers by 500%.

Fulfillment Capacity service Distribution center fulfillment capacity, implemented for multi-tenant supported DC and RDC. Latency 50ms, 120 TPS

Inventory Ingestion Orchestrator Market place inventory ingestion for Walmart Outbound IMS. 22Mn Items, 20000 Sellers, 4 Million updates/ hr

Virtual Inventory Ingestion and Availability Engine

IMS Data Analytics Framework App Metrics and functional Analytics 10000 Events/mins

IMS - Monitor, Alerting & Worker Bot

Audit App 10000 Events/mins

Global Reservation Latency 50ms, 120 TPS

Global Level Inventory – Used to display availability watermarks on Walmart.com. Latency 2ms , 24 TPS

Node Level Inventory – Availability at node level to MCSE Latency 3ms, 13k TPS

Real Time availability Engine – Availability calculation for ATS , Onhand and other inventory. Latency 400ms 300 TPS

Multi-Channel Sourcing Engine Latency 400ms 300 TPS

Reporting Reports of End-End availability ratios, Item-Distributor Mappings

Sterling upgrade from 9.2.1 and 9.4.1.15

IMS Mosaic Layer Orchestration layer for microservices, created a framework and library

IMS Node setup, Item feed Data Engineering – stream processing and backend processing.

IMS Create Reservation Capturing outbound demand and orders in IMS. 100 TPS, 110 ms

IMS Production CI & CD Largest project delivered independently and complete ownership. Initializing up 3 Node RAC cluster Oracle, 750 GB L2 cache, 35 clusters of App and Batch services with DR and HA. Adopting newly built DC on OpenStack and OneOps. VM and server foot print of 1200+ VMs in record time of 2 months

Patents

Methodology for delivering Chain of Fallback Customer Communications using Composite and Concurrent State Machines - US11973637B1 · Issued Apr 30, 2024

Database System for Distribution Center Fulfillment Capacity Availability Tracking and Method - US20170091683 · Issued Mar 30, 2017

August 2010 – October 2012

BestBuy (BBTG - Accenture - IDC)

Senior Programmer

Java, IBM Websphere, IBM MQ, Oracle,
SOAP, XML, XSLT, XSD, XSL, BPM,
Eclipse RCP,
IBM Sterling SSFS

BBY Mobile & Retail Enhancements

(Developed Mobile Alerts & Management Framework

Optimized D2C Inventory Availability

Built Carrier Activation Platform

Streamlined Pre-Sales Order & In-Store Pickup Pipelines

Enhanced Retail POS Screens (SSFS COM)

Upgraded Sterling Selling & Fulfillment Suite - 7.11 to 9.1)

Internships Projects

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|---|---|
| HCL CDC <i>C#, ASP.NET, MS SQL Server, IIS Server</i> | Defect Tracking System |
| Indian Railways, <i>C++, COBOL</i> | Settlement information Systems Management - UI, Print templates and connector to data repository. |
| NE Railways, <i>YCCE,</i> | Comparative study on UTS and PRS |
| <i>Drupal, LAMP</i> | Internal Learning management and students portal. Based on Drupal & LAMP |

Education

MS - **Machine Learning** (Online), **Georgia Institute of Technology, Atlanta, USA** 2027 (In Progress)
BE - **Computer Technology**, **Yeshwantrao Chavan College of Engineering, Nagpur, INDIA**

I hereby declare all the above information is true to the best of my Knowledge.

Shiv Prakash, Bangalore, KA, IN