Kanimozhi.S

Senior Software Engineer|Data Science Enthusiast|Burnaby,Canada|+12508793927|kanimozhi042@gmail.com

A versatile and experienced Senior Software Engineer with over 9 years of IT industry exposure, specializing in Microservices. Skilled in designing, developing, implementing, and testing solutions for various domains such as financial services, banking, and identity management. Adept at working in all phases of software development life cycle, from requirement analysis to deployment. A quick learner with strong analytical and problem-solving skills, a motivated team player and leader, and an effective communicator. A Master's degree in Data Science and a strong background in computer science with a Bachelor of Technology.

Certification

Microsoft Certified : Azure Data Engineer Associate

Technical Skills

- Programming Languages: Java,C++,Python,R,COBOL,CICS,JCL,Natural/ADABAS,SpringMVC,SpringBoot
- Data Visualization: Tableau,PowerBI
- Machine Learning: Tensorflow,PySpark
- Database: SQL,VSAM
- Big Data Processing: ApacheSpark,DataBricks,AzureDataBricks,AzureSynapseAnalytics,Azure DataFactory, ADLS GEN2
- Work flow Management: Airflow
- Tools: Endevor,Expeditor,File-Aid,ABENDAID,CA7,Infopac,MS-Office

Professional Experience

Data Analyst Intern

Victoria Solutions, Canada |April –May 2025

Project: Sales Performance Analysis using PySpark and PowerBI

- Designed and built ETL pipelines using Azure Data Factory to ingest and transform raw sales data from multiple sources.
- Stored processed data in Azure Synapse Analytics, and used PySpark in Azure Databricks for further aggregation and KPI generation.
- Performed data cleaning, transformation, and aggregation to generate KPIs such as monthly revenue, top products, and sales performance.
- Created interactive PowerBI dashboards to visualize sales trends and highlight underperforming regions and products.
- Findings helped stakeholders optimize regional strategies, resulting in a 10% improvement in overall sales performance.

Project: Customer Loyalty & Segmentation Analysis using RFM in Azure

- Designed and implemented a loyalty segmentation pipeline using Azure Databricks and PySpark, analyzing purchase data from 10,000+ customers.
- Performed RFM (Recency, Frequency, Monetary) analysis to score and categorize customer loyalty into tiers (Champions, Loyal, At-Risk, etc.).
- Identified high-LTV loyal customers and at-risk segments with declining frequency or monetary value.
- Visualized clusters and loyalty tiers using Tableau, providing insights to support targeted retention and reactivation campaigns.
- Delivered actionable strategies for personalized offers and communication, contributing to a forecasted 15% uplift in retention.

Senior Software Engineer-Team Lead

Cognizant Technology Solutions, Chennai, India|June2018–Sep2022
Project: Identity Manager | Client: Northern Trust

- Developed Tableau reports to track and analyze past access requests, providing clear insights for stakeholders.
- Integrated Tableau with SQL databases to generate reports on access requests and approvals for compliance and audit purposes.
- Created data visualizations to support security monitoring and ensure transparency in access provisioning processes.
- Full-Stack Development: Built scalable solutions using Java, ReactJS, SQL, and RESTful APIs, contributing to both backend and frontend.
- System Architecture: Designed secure, scalable architectures with a focus on performance, data encryption, and optimized database queries.

Software Engineer

Tata Consultancy Services, India|Feb2017-Jun2018
Project: Settlements-OFAC | Client: Morgan Stanley

- Client Collaboration: Captured and analyzed business requirements, ensuring alignment with OFAC compliance standards and translating needs into technical specifications.
- Solution Design: Designed and developed a settlement application using Mainframe technologies (Natural/ADABAS), ensuring scalability, regulatory compliance, and legacy system integration.
- End-to-End Development: Managed all phases of the SDLC, delivering secure, functional, and on-time solutions.
- Integration & Optimization: Integrated the application with external systems, optimized data flow, and implemented validation mechanisms to ensure regulatory compliance and error-free settlements.
- Testing & QA: Conducted unit and integration testing to validate functionality, performance, and security while collaborating with QA teams to resolve issues pre-production.
- Post-Deployment Support: Monitored performance, resolved issues, and implemented optimizations to improve transaction throughput and maintain compliance with evolving regulations.

Software Engineer

CoreMindTechnologies,Chennai,India|Jan2015-Jan2017
Project: Legacy Financial System Modernization

- System Analysis & Design: Analyzed mainframe architecture and designed modular COBOL components for compatibility with modern financial systems.
- Application Development: Built high-performance applications using COBOL, DB2, and CICS, enabling efficient transaction processing for increased volumes.
- Data Migration & Integration: Migrated legacy IMS databases to DB2 with minimal disruption, ensuring data integrity through robust validation and transformation.
- Batch Job Automation: Automated batch processes using CA7, optimizing financial transaction scheduling, reporting, and end-of-day processing.
- Testing & Quality Assurance: Conducted unit and integration testing, ensuring modules met functional requirements and resolved issues pre-production.
- Post-Deployment Support: Provided 24/7 support, optimizing system performance and ensuring a smooth production transition.

Software Engineer

HCL Technologies, Chennai, India|Jun2011-Jun2013
Project: Oppenheimer

- Solution Design: Designed and developed a financial transaction system using COBOL on Mainframe, ensuring scalability and regulatory compliance.
- Full SDLC: Participated in all phases of the software development lifecycle, delivering secure, high-quality solutions.
- Testing & Debugging: Conducted unit testing, debugged issues, and collaborated with QA teams for thorough system testing.
- Job Automation: Automated batch processes with CA7, ensuring timely and error-free financial transaction execution.
- Cross-Functional Collaboration: Worked with analysts, architects, and QA in an Agile environment to ensure project success.
- Production Support: Provided post-deployment support, monitored performance, resolved issues, and optimized system efficiency.

Education

Master of Science in Data Science–GPA–3.65/4.0
Thompson Rivers University, Kamloops, Canada|Sep2022-May2024

Bachelor of Technology-Information Technology–83.9%
R.M.D Engineering College - Anna University,India|Sep2007-May2011

Awards and Achievements

- Received Outstanding Performance award for the account in HCL Technologies.
- Received Q2 award in Cognizant Technology Solutions for taking up challenging tasks and excelling in them.

Publications

IEEE|WCL2024-0556

Simplex Transformation Based Deep Unsupervised Learning for Optimization: Power Control with QoS Constraints in Multi-User Interference Channel

This paper introduces a novel neural network-based solution that transforms a probability simplex to implement the feasible region of an optimization problem with polytope constraints described by non-negative and monotone matrices. We utilize the proposed solution for optimizing the power allocation of multiple base stations serving multiple users simultaneously in the presence of inter-cell interference while guaranteeing the individual users' data-rate constraints. Simulation results demonstrate that the proposed scheme significantly outperforms the existing state of the art neural networks in terms of the network average sum rate, while guaranteeing meeting the users' data-rate constraints