

Shwetank Shivhare

Tech Manager/Developer

Singapore

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Results-driven **Technology Leader** with over **13 years of experience** delivering enterprise solutions in **AI/ML, LLM, credit risk modelling, microservices architecture, and cloud-native platforms**. Proven ability to lead cross-functional teams across geographies (Singapore, India, China), having managed the development of over **200 applications** in high-stakes banking environments. Expert in building **scalable ML pipelines**, modernizing legacy systems, and driving cost-efficient migrations across cloud platforms like **PCF, OpenShift, and Spark clusters**. Strong hands-on expertise in **Java, Python, PySpark, Spring Boot**, and advanced ML frameworks including **XGBoost, TensorFlow, and Transformer models**. Recognized for transforming business needs into robust tech solutions, improving model turnaround time, and consistently aligning technology delivery with regulatory and strategic goals.

Key Achievements

- Delivered **200+ applications** across credit risk, climate risk, and financial modelling in a highly regulated banking environment.
- Achieved **40% cost savings** through platform modernization (Tibco → Spring Boot/Python, Oracle → MariaDB).
- Spearheaded deployment of **88 microservices** in a regional credit scoring platform across Asia.
- Led global teams of up to **12 developers** across Singapore, India, and China.
- Integrated **AI/ML pipelines** with Spark and OpenShift for real-time and batch scoring of loan portfolios.
- Created NLP based assistant to generate audit documents.

Core Competencies

Technical Leadership · Machine Learning & AI · Cloud Platforms (PCF, OCP, GCP) · Microservices Architecture
Spring Boot · Java · Python · PySpark · Credit Risk Modelling · Model Lifecycle Management · Data Engineering
Team Building & Mentorship · Stakeholder Management · Agile & DevOps · System Migrations

Experience

Freelancing- Founder & Developer | EdTech AI Product (SMS + SIS)

Singapore | From Mar 2025

- Leading the development of **an AI-powered School Management System (SMS) and Student Information System (SIS)**, designed to streamline operations, enhance communication, and improve learning outcomes for schools.
- Harnessing the latest advancements in **Generative AI, Computer Vision, and ML** to deliver innovative, student-centric features.
- Key AI Innovations:
 - **Real-time video-based face detection** for automated student attendance
 - **Genetic AI engine** for generating optimal class schedules.
 - **Heuristic + ML communication monitor** for safe and compliant school messaging.
 - **Computer vision model** to automatically detect and block sensitive images and content.
 - **Age-specific GenAI assistants** tailored to students, teachers, and parents.
- Technical Architecture:
 - Backend: **FastAPI** with **PostgreSQL** for high-performance data management.
 - Frontend: **React Native Expo** for a cross-platform mobile-first experience.
 - Deployment: **Docker-based infrastructure** with **Nginx reverse proxy** for SSL, caching, and load balancing.

- Security: **Dual-proxy architecture, JWT for external authentication, OAuth for internal services, role & scope-based access control, and self-hosted deployment** for maximum data protection.
- Designed for **scalability, reliability, and compliance** with educational data standards.
- Building the product with **modular, reusable components** to allow easy integration with third-party EdTech tools.
- Enabling **real-time analytics dashboards** for teachers, parents, and school administrators, providing actionable insights on student performance and school operations.
- Established a foundation for **PLP – Personalised Learning Path and AI-powered report card comment generation, financial categorization, and portfolio sharing features** planned in future iterations.

Vice President– Tech Manager & AI/ML Lead in MOT Risk

DBS Bank, Singapore | *June 2020 – Sep 2024*

- **Led a cross-regional team** of 12 developers across Singapore, India, and China to deliver over **200+ enterprise-grade applications**, covering credit risk modelling, regulatory reporting, and AI-powered insights.
- Led the development of an internal **NLP-based assistant using large language models (LLMs) to help risk analysts query model performance, interpret outputs, and generate audit documentation, improving compliance report turnaround time by 35%.**
- **Development of feature mart and DDOM control tower for model monitoring.**
- Spearheaded development and lifecycle management of **credit scoring and risk models** (AIRB, SME, Climate Risk, Stress Testing, Watchlist Prediction), supporting both **regulatory (MAS, Basel II/III)** and internal requirements.
- Architected and deployed **88 microservices** in the Credit Scoring Model (CSM) ecosystem, integrating internal and third-party data sources to generate regional PD, LGD, EAD, ICRR, and ACRR ratings.
- Orchestrated **major platform migrations** (Tibco → Spring Boot/Python, Oracle → MariaDB, Solaris → Linux), achieving up to **40% cost savings** and improving system performance by **30%.**
- Delivered end-to-end machine learning pipelines using **PySpark, Flask, Spring Boot**, and hosted on **PCF/OpenShift/Spark clusters**, enhancing model retraining frequency and deployment speed.
- Championed **Agile and TDD practices** (Jira, JUnit, Mockito) and implemented CI/CD pipelines, reducing release cycle time by **25%** and improving code quality via regular peer reviews.
- Mentored and evaluated team members, resulting in **2 internal promotions** and consistently high satisfaction in 360° reviews.
- Engaged with business stakeholders and risk SMEs to define model requirements, improve data quality, and align solutions with strategic risk objectives.
- Conversant in model evaluation, solution delivery, end to end AI/ML models, AI controls, SDLC, Cloud solutions.
- Acted as the **technical SME for credit model modernization**, collaborating with GRC and regulatory teams for model governance and audit readiness.
- Managed relationships with external vendors and third-party service providers.
- Manage stakeholder expectations and communicate project status, risks, and dependencies effectively.
- Foster a culture of collaboration, innovation, and continuous improvement within the development team.

Senior Consultant

Helius Technologies (Client: DBS Bank) | *Singapore, Dec 2016 – May 2020*

- Developed ML model “**CRANE**” using XGBoost to predict customer default probability within 12 months.
- Contributed to the “**Sticky Deposit**” ML project to analyze customer retention patterns.
- Modernized legacy apps: migrated Tibco BE to Spring Boot, improving maintainability and reducing runtime by 30%.

Tech Lead

Opus Software Technologies (Client: Western Union) | India, Sep 2015 – Nov 2016

- Led migration of Tibco BW 5.x to BW 6.3 across core money transfer systems.
 - Designed and implemented business logic using Java and Tibco for Profile Service transactions.
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IT Analyst

Tata Consultancy Services (Client: JetBlue) | India, Jun 2014 – Sep 2015

- Managed a team of 22 developers across Crew, Flight, and Customer domains.
 - Delivered applications including Auto Check-In and Flight Notification System using Tibco BW/BE and Java.
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System Engineer, Tech Mahindra Limited

Tech Mahindra, (British Telecom) | India, Feb 2011 – May 2014

- SME for WFMT Ethernet product; developed modules using Tibco, Java, and J2EE.
 - Led design/code reviews and cross-team coordination
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Education

Bachelor of Engineering

Computer Science

2010

Certifications: SCJP, OCJP, Oracle SQL

Trainings: ML with SAS, ML with R, Analytics with Python.

Technical Skills

Languages: Java (8/11/17), Python, R, SQL, PL/SQL

Frameworks/Tools: Spring Boot, PySpark, TensorFlow, Scikit-learn, XGBoost, Tibco BW/BE, JUnit, Mockito

Cloud & DevOps: PCF, OCP, GCP, Jenkins, Git, Maven, CI/CD, Airflow, Collibra, Ni-Fi, Flux, SAS

Data & Storage: Oracle, MariaDB, Hadoop, Spark SQL

Other: Swagger, Postman, Jira, Confluence, Linux, JSON, XML, BPM