

# SAURABH SAMPATKUMAR LOYA

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## SKILLS AND CERTIFICATIONS

**Languages:** Python, Java, C++, JavaScript, TypeScript, SQL

**Databases:** MySQL, PostgreSQL, MongoDB

**Frontend & Backend:** Angular, React, Spring, Flask, Django, Apache Kafka, Apache Airflow, Apache Spark

**ML/Data:** NumPy, Pandas, PyTorch, TensorFlow, Scikit-Learn, Spacy, LangChain

**Development & Visualization Tools:** Git, Jira, Docker, Tableau, Power BI

**Certification:** AWS Certified Cloud Practitioner, Azure Fundamentals

## EDUCATION

**Master in Computer Science**, The University of Utah (GPA: 3.6/4) | Salt Lake City, Utah

Aug 2023 – May 2025

**Bachelor in Computer Science and Engineering**, MIT World Peace University (GPA: 3.8/4) | Pune, India

Aug 2017 – May 2021

## WORK EXPERIENCE

**Data Scientist Intern**, BMW Bank of NA, Salt Lake City, Utah

Jan 2025 - May 2025

- Prepared a high-quality dataset by performing **data mining, data analysis, and cleaning** efforts using **Python and SQL**, enabling the development of a machine learning-driven loan optimization model impacting \$100M–\$300M in daily originations.
- Engineered **40 features from 688 raw attributes** by applying feature engineering techniques to high-dimensional, unstructured data using **Pandas** and **NumPy**, enhancing model accuracy and data usability.
- Built interactive **Tableau** dashboards to visualize loan performance trends, enabling the Credit and Risk team to make informed decisions on a \$9B+ financial portfolio.

**Software Development Intern**, H7 BioCapital, San Francisco, California

June 2024 - Sept 2024

- Crafted a full-stack scheduling application using **Django, HTML/CSS**, and **JavaScript** to streamline investor–startup interactions, reducing email coordination time by ~60%.
- Integrated **Google Calendar & Zoom API** to automate meeting creation, reminders, and calendar between investors and startups.
- Translated business requirements into well-defined technical stories in **Jira**, supporting **agile** development and implementation.

**Software Engineer**, Volkswagen Group Technology Solution, Pune, India

Aug 2021 - July 2023

- Engineered a global **SaaS survey platform**, adopted by 10+ Volkswagen entities to streamline survey creation, distribution, and analytics across departments and geographies.
- Developed a **Query Management System** with **RESTful APIs** to automate HR inquiry routing, reducing average resolution time from **5 days to 3 days** and achieving approximately 40% improvement in turnaround.
- Innovated a task automation solution using **Python, Selenium**, and **Apache Kafka** to replace manual RPA processes, reducing task time and cutting RPA license costs by over **\$15,000 annually**.
- Optimized an **OCR pipeline** with **Azure Cognitive Services**, achieving 8x faster document processing and 15% accuracy gain.
- Integrated **LLM and NLP** into an internal chatbot, enhancing responses quality and expanding its knowledge base by 30%.
- Designed and tested backend services using **JUnit** and **Mockito**, validating business logic and API–database interactions.

**Founding Engineer**, Venkatesh Agencies, Maharashtra, India

May 2019 – May 2021

- Developed **full-stack web applications** streamlining inventory, billing, and customer workflows handling for a medical distributor.
- Managed **MySQL** database schema, indexing, and query optimization, reducing report generation time from 6 min to under 30 sec.
- Analyzed multi-source sales and inventory data, covering **200K+ SKUs** and 50+ pharmacy partners.
- Built interactive dashboards using **Tableau** to monitor real-time sales, forecast shortages, and visualize seasonal demand.

## PROJECTS

- Distributed Key-Value Store Using Raft Consensus Algorithm:** Implemented a fault-tolerant, replicated **key-value store** in **Golang** using Raft, ensuring strong consistency, linearizability, and 4s leader failover with log replication and persistence.
- CITI Bike Rental Data Analytics and Forecasting:** Conducted **Exploratory Data Analysis** on 5M+ ride records and trained a predictive model using **Apache Spark** and Facebook Prophet, optimizing CITI Bike demand forecasts and inventory planning.
- LLM based Recommendation System:** Crafted a medicine recommendation system using **Llama 2, LangChain**, and **Chroma DB** with Retrieval-Augmented Generation (**RAG**), achieving an **F1 score of 0.87** in providing relevant medication suggestions.
- Android Malware Detection:** Compared various machine learning models from scratch including Neural Networks, Perceptron, and others, to detect malicious Android applications using system call frequency features, achieving a highest **F1 score of 0.89**.

## HONORS AND RECOGNITION

- Innovation Award** in recognition of creative thinking in automating training of chatbot using LLM project.
- Achievers Award** for successful project deliverable with Customer Satisfaction Survey rated above 9.