Piyush Mahajan

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Overview

Senior System Engineer with 3+ years of experience in developing system-driven solutions, automation, and business intelligence to optimize performance. Expertise in SQL, Java, Python, and data visualization tools to enhance system efficiency, scalability, and strategic decision-making.

Technical Skills

Programming Languages: Java, C, C++, Python (NumPy, Pandas, Scikit-learn), SQL

Machine Learning: Random Forest, K-Means Clustering, SVM, Anomaly Detection, Predictive Modeling

Data Science & Analytics: Statistical Analysis, Feature Engineering, Model Optimization, ETL Pipelines

Frameworks & Backend: Spring Boot, Spring MVC, Spring Data JPA, Spring Security, APIs, MySQL, MongoDB, Postgres

Cloud & ML Platforms: Google Cloud Platform (GCP), AWS IoT Core, ML Pipeline Development

Visualization & BI: Tableau, Power BI, Data Visualization, Business Intelligence

Tools: Ab Initio GDE, Git, Scrum, Jira

Methodologies: Object-Oriented Programming (OOP), Agile/Scrum, Test-Driven Development (TDD), MLOps, A/B Testing, Project Management

Professional Experience

Senior System Engineer, Infosys – India   *Sep 2021 – Dec 2023*

- Led **Java** based software application development for enterprise solutions in **Agile** teams with **Test Driven Development**.
- Migrated applications from on-prem infrastructure to **Google Cloud Platform (GCP)**, ensuring seamless deployment.
- Designed optimized **SQL** queries and integrated **RESTful APIs**, leading to **60%** increase in annual revenue.
- Improved system efficiency by **39%** by optimizing **25+ SQL queries** in **Teradata BTEQ**.
- Refined **ETL pipelines** using **Ab Initio GDE** and **Java**, resolving **40%** of data anomalies.
- Mentored juniors in **Java** and **analytics**, promoting best practices in coding and deployment.
- Proactively solved problems, met deadlines, and escalated issues as needed.

Machine Learning Engineer, Industrial Control and Appliance – India   *Jun 2020 – Sep 2021*

- Developed a **Smart Home Automation** system using **Random Forest** & **K-Means** clustering, improving efficiency by **12%**.
- Designed a **Fault Detection System** using **SVM** and **Anomaly Detection** for real-time network issue identification, boosting efficiency by **10%**.

Graduate Intern, Mansai Biomedical PVT LTD – India   *Jun 2018 – Jun 2019,*

- Built a **Waste Management and Vehicle Tracking System** using **AWS IoT Core** & **GPS sensors** for real-time monitoring and route optimization.

Projects

Smart Resume Matcher & Job Recommender (NLP, Python, Sentence-BERT)   *Aug 2025 – Present*

- Developed an AI-powered tool that parses resumes and recommends job listings using **NLP** and **cosine similarity** with **Sentence-BERT embeddings**.
- Built a smart ranking algorithm to match user skills with job descriptions, achieving **85%+ accuracy** on labeled test data.
- Designed an interactive dashboard using **Streamlit** to visualize skill gaps and top-matching jobs; deployed via **Docker**.
- Integrated resume parsing with **spaCy** and job listing data from Kaggle, showcasing an end-to-end ML workflow.

IBM Employee Attrition (SQL, NoSQL, MySQL, MongoDB)   *Jan 2024 – Apr 2024*

- Reconciled the IBM Attrition Dataset into **3NF** and created **ER models**; loaded data into **MySQL** and **MongoDB**.
- Wrote complex **SQL/NoSQL** queries to extract insights on employee attrition factors for business use cases.

Market Research Firm Data Analysis (Business Data Warehousing)   *Jan 2021 – Mar 2021*

- Formed a **Dimensional Fact Model** from a normalized transactional **database** for reporting and **customer behavior analysis**.

Education

Lindsey Wilson University, Kentucky – Master of Science in Technology Management	*Dec 2025*
University of Texas at Arlington, Texas – Master of Science in Business Analysis	*Dec 2024*
University of Pune, India – Bachelor of Engineering in Computer Science	*May 2021*