

# Rahul Singh

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## SUMMARY

Dynamic Machine Learning Engineer with 6+ years of experience building and deploying AI-driven solutions including LLM fine-tuning, AI agents, and scalable ML workflows. Skilled in Python, LangChain, MCP (Model Context Protocol), FastAPI, Docker, and Kubernetes for creating chatbots, recommendation systems, and automated decision-support applications. Expertise in prompt engineering, model optimization, and microservices architecture to deliver real-time, data-driven insights for enterprise solutions. Adept at collaborating with cross-functional teams to align AI capabilities with business objectives.

## SKILLS

• <b>Machine Learning:</b>	LLM Fine-tuning, Prompt Engineering, NLP, AI Agents, Generative AI, Recommendation Systems
• <b>Analysis &amp; Reporting:</b>	Excel (Pivot Tables, VLOOKUP, Macros), Power BI, Tableau, SQL
• <b>Languages &amp; Frameworks:</b>	Python, FastAPI, LangChain, LangGraph, MCP, PyTorch, scikit-learn
• <b>APIs &amp; Orchestration:</b>	REST APIs, MCP Integration, LangChain Workflow Automation
• <b>Cloud &amp; Deployment:</b>	Azure, AWS S3, Docker, Kubernetes, CI/CD Pipelines
• <b>Visualization:</b>	Tableau, Power BI, Matplotlib, Seaborn
• <b>Data Engineering:</b>	Databricks, Apache Spark, Snowflake, ETL Automation (Azure Data Factory)
• <b>Collaboration Tools:</b>	JIRA, Confluence, MS Project, Microsoft Teams
• <b>Version Control &amp; Tools:</b>	Git, JIRA, Confluence, Agile/Scrum

## EXPERIENCE

**Honda Motors,**

**Data Scientist**

Aug 2021- Current

- Designed and deployed **LLM-powered chatbot prototypes** to automate financial reporting queries, enabling **natural language interaction for internal stakeholders**
- Performed source-to-target data mapping and built OLAP models in **Snowflake** and **Power BI** to enhance financial reporting performance
- Built **AI agent workflows** leveraging **LangChain and MCP tools** for dynamic data retrieval, integrated with FastAPI for scalable API services
- Fine-tuned **Large Language Models** for domain-specific tasks (financial queries, sales forecasting), optimizing **response accuracy and latency**
- Collaborated with senior managers to define data priorities and deliver impactful insights that supported sales and product initiatives
- Managed large data sets using SQL and Snowflake, identifying key areas for growth and optimization in sales and client interactions
- Developed **microservices architecture** with FastAPI and deployed containerized ML solutions using **Docker and Kubernetes**, ensuring high availability and scalability
- Conducted root cause analysis on warranty-related datasets using SQL and Snowflake, identifying inconsistencies in cash flow data and improving attribution accuracy by 30%
- Automated **ETL pipelines in Azure Data Factory** for ingesting structured and semi-structured data, reducing manual effort by **60%**
- Leveraged Excel (pivot tables, VLOOKUP) to enrich claim data, resolving inconsistencies and supporting supplier attribution efforts
- Developed **real-time monitoring dashboards** in Power BI and Tableau for model performance tracking and business KPIs

**NextGen Healthcare**

**Data Analyst**

Feb 2020 - Aug 2021

- Implemented a customer segmentation model using clustering algorithms in Python, enhancing targeted marketing efforts and increasing customer engagement by 25%.
- Migrated legacy warehouse to Snowflake and Databricks, improving query performance and data access

- Authored user stories and functional documents; collaborated with developers to meet evolving business requirements.
- Created and maintained automated reporting processes in Power BI, Tableau, and Looker, delivering actionable insights to internal stakeholders and aligning with business needs.
- Conducted data cleansing and transformation processes to improve data quality, resulting in a 35% reduction in data-related issues.
- Utilized SQL to perform complex queries and analyses, providing insights that informed product development and strategic planning
- Performed root cause analysis on CRM data discrepancies using SQL and Python, identifying patterns in incomplete datasets and improving data quality by 35%.
- Designed ETL processes to integrate CRM data into Snowflake, ensuring seamless data flow for warranty-like claim analysis.
- Developed SQL-based data models to support automated reporting pipelines and drive operational efficiencies.
- Integrated Amazon S3 and Teradata for large-volume reporting pipelines using SparkSQL and T-SQL
- Partnered with product teams to analyze user data and identify key trends, contributing to a 10% increase in user retention.
- Collaborated with product teams to validate data insights and document assumptions, aligning analytics with business recovery objectives.

## Phoenix Technologies

### Business Analyst

Sep 2018 - Jan 2020

- Led requirement gathering sessions and produced detailed BRD and FRDs to guide development efforts.
- Documented project documentation, including BRDs, FRDs, and user manuals, ensuring clarity and alignment with project objectives.
- Utilized SQL and PowerBI for financial data analysis, providing valuable insights for decision-making.
- Collaborated closely with stakeholders to analyze business requirements and propose innovative solutions, fostering stakeholder engagement and buy-in.
- Partnered with product and sales teams to create data-driven **client engagement strategies**, contributing to a 15% increase in platform adoption.
- Developed **interactive Tableau dashboards** to track KPIs and performance metrics, enabling data-driven decision-making across the business.
- Supported financial and retail analytics initiatives; ensured alignment between business and technology functions
- Introduced the use of R for advanced statistical analysis, leading to more accurate forecasting and data interpretation.
- Improved operational efficiency by 20% through the implementation of BI solutions, optimizing business processes and reporting solutions, ensuring alignment with organizational goals
- Demonstrated ability to work cross-functionally and respond to **ad hoc data requests**, reprioritizing to support urgent business needs
- Utilized SQL and Power BI to analyze financial datasets, identifying unmapped claims and supporting cost recovery strategies with actionable insights.
- Collaborated with product and recovery teams to validate business requirements and document mapping assumptions, contributing to a 15% increase in platform adoption.

## EDUCATION

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### Masters in Information Systems

Stevens Institute of Technology, Hoboken, New Jersey

### Bachelors in finance Market

University of Mumbai, India