

Ishmeet Kaur

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Education

MSc in Computing Science (Big Data) | Simon Fraser University | Burnaby, BC

Sept 2025 - Present

- Coursework: Big Data Lab I (Hadoop, Spark, Python, AWS, Linux), Machine Learning, Big Data Lab II, Distributed Systems and Cloud Computing

B.Tech in Electronics & Computer Engineering | J.C. Bose University of Science & Technology | India (CGPA: 8.56/10)

2019 – 2023

Skills

- Data Analysis & Querying:** SQL, Python, Excel, data cleaning, joins/aggregations, exploratory data analysis
- Data Engineering:** PySpark, Apache Spark, Kafka, Airflow, dbt, Docker, ETL/ELT processing, Data Modeling, incremental processing, medallion architecture, SCD concepts, AWS (S3, EC2), Linux
- Analytics & BI:** Power BI, Excel, data cleaning, joins/aggregations, exploratory data analysis
- Databases & Warehousing:** BigQuery, Snowflake, PostgreSQL, MySQL, AWS S3
- Visualization & Apps:** Matplotlib, Tableau, Plotly, Streamlit dashboards, Dash
- DevOps & Operations:** Git/GitHub, Jenkins, CI/CD concepts, Dynatrace, Jira, ServiceNow

Technical Projects

Airbnb End-to-End Data Engineering Pipeline (Snowflake | dbt | AWS S3 | Python)

- Designed and implemented an end-to-end ELT pipeline for **Airbnb listings, bookings, and hosts** data, ingesting CSVs to **AWS S3** and modeling analytics-ready datasets in **Snowflake** using **dbt**.
- Built a **medallion architecture (Bronze → Silver → Gold)**: raw staging tables, standardized/validated silver entities, and curated gold marts for analytics consumption.
- Developed **dbt incremental models** to efficiently process new/updated records and reduced compute by avoiding full refresh runs where not required.
- Implemented **SCD Type 2 snapshots** for bookings/hosts/listings dimensions to preserve historical changes for point-in-time reporting and trend analysis.
- Delivered downstream analytics structures including a **Gold-layer OBT (One Big Table)** and a **fact table** to support BI-style querying and dimensional analysis.

Credit Risk Early Warning System (Python | ML | Tableau | SQL)

- Built an end-to-end **credit risk monitoring system** that identifies **emerging high-risk borrower segments** using Python, **business segmentation rules**, and **logistic regression-based probability scoring**.
- Engineered analytical datasets** through feature engineering, preprocessing, and KPI generation; produced **ML-driven default probability scores** and integrated them into a **Tableau early-warning dashboard** for real-time portfolio monitoring.
- Delivered actionable **portfolio health insights** including **baseline default rate**, **risk lift**, and **watchlist signal strength** enabling drill-down analysis of **utilization**, **DTI**, **loan purpose**, and **credit history patterns** to support proactive risk decision-making.

Professional Experience

Associate Systems Engineer | IBM

Aug 2023 – March 2025

- Gained **banking** domain experience at **Nationwide Building Society (UK)**, supporting both Mortgage operations and customer-facing teams through close collaboration with frontline banking professionals.
- Used **SQL + Python** to analyze application logs and troubleshoot database issues, performing data cleaning and incident resolution that reduced issue turnaround time by **~25%**.
- Collaborated with QA, developers, and DBAs to release fixes, automate recurring tasks, and improve deployment reliability.
- Conducted **root-cause analysis (RCA)** and trend identification for recurring issues, improving system resilience.
- Performed **daily health checks** using Dynatrace on critical banking applications, helping maintain **99.9% uptime** and proactively detecting performance degradations before impacting users.

- Supported debugging of software and database issues, strengthening problem-solving and system analysis.
- Assisted in system checks, user support, and documentation directly relevant to technical service desk expectations.
- Maintained data integrity, logs, and version documentation via Git-based workflows.

Certifications

- **IBM Enterprise Design Thinking Practitioner**
- **IBM Agile Explorer**
- **IBM Consulting Way Habits**
- **IBM Cloud Advocate Essentials**
- **IBM Banking Industry Jumpstart**
- **ISTQB Foundation Level**