

# SAKSHI GUSAIN

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## EXPERIENCE

### National Australia Bank | Gurugram, India

March 2023 - July 2024

#### Advisor Engineer-I | Marketing Data Science Team

- Managed critical BAU (Business-As-Usual) processes, including **feature store updates and model scoring**, contributing to approximately A\$33 million in annual incremental value.
- Implemented a **Testing Framework** using **PyTest** incorporating **Chi-square testing** for the feature store to identify data quality issues, preventing disruptions to 24 ML models.
- Conducted **advanced data analysis** using **Matplotlib and Seaborn** to evaluate refinancing patterns in home loan retention campaigns. Identified potential revenue losses due to refinancing, enabling data-driven retention strategies.
- Developed **21+ key business metrics** including sale price growth, LVR, and internal refinance using **SQL** for data science use cases by collaborating closely with stakeholders, ensuring data-driven decision-making.
- Deployed new Machine Learning models** into production by implementing best MLOps practices, including CI/CD pipelines, model monitoring, and automated retraining.
- Optimized batch inference scoring**, reducing processing time from 7 days to just 2 days (over **70% improvement**), enhancing operational efficiency and model scalability.

### Amazon | Bangalore, India

January 2022 - June 2022

#### Software Development Engineer Intern | Cards and Net Banking Team

- TPR Salvage Flow for NB**: Built an end-to-end service to improve third-party responses, **increasing Net Banking success rates by 6-7%** across India and **saving 700-900 daily transactions** from failing due to pending charge status issues.
- Acquired hands-on experience leveraging pivotal AWS resources, including **Step Function, Lambda, CloudWatch, and API Gateway**, enhancing proficiency in cloud-based solutions.
- Prepared the **full project lifecycle** from solution architecture to deployment, post-deployment monitoring, and 100%-unit test coverage.
- Identified and mitigated SAS risks**, ensuring stability in critical workflows.
- Engineered a **real-time metric generation** system, monitoring diverse data points within the service and **deploying anomaly detection alarms**.

## SKILLS

### Technical Expertise

Python, Pandas, NumPy, Matplotlib, PySpark, Pytest, PyTorch, Scikit-learn, SQL, Java, Git/GitHub, Amazon Web Services, Databricks, Power BI, Tableau, Alteryx, Jupyter, VS Code, Data Structures and Algorithms, Object Oriented Programming, Data Visualization, ETL, Database Management System, Machine Learning, Statistics, Financial Analysis, Data Analysis, Testing Framework

### Soft Skills & Strengths

Analytical & Critical Thinking Collaboration Problem-Solving Continuous Learning Teamwork Adaptability Strong Work Ethic & Initiative

## EDUCATION

### Audencia Business School | Paris, France

September 2024 – Present

#### Master of Science in Data Management for Corporate Finance

- Key Courses**: Statistics and econometrics, Strategic analysis, Python in finance, big data and analytics, financial data Visualization, Data management and analytics, Machine Learning, Basics of VBA for Excel.
- Notable Projects**:
  - AI Financial Insights Extractor using RAG** - Developed a private and secure Financial Document Analyst using RAG architecture to extract real-time insights using FAISS and LLMs via an interactive Streamlit app.
  - Credit Card Fraud Detection** – Developed an ML-based anomaly detection system to identify suspicious transaction patterns
- Thesis**: "Predictive Finance Risk Analytics": Benchmarking machine learning models for predicting business failure and credit risk.

### ABES Engineering College | Ghaziabad, India

August 2018 – July 2022

#### Bachelor of Technology in Electronics and Communication Engineering

- Key Courses**: Programming for Problem Solving, Python Programming, DBMS, Operating Systems, SQL, Digital System Design, Optical Communication, Wireless and Mobile Communication, Computer System Security.
- Notable Projects**: **Virtual Assistant Using Python** - A voice-controlled virtual assistant proficient in performing tasks.

## AWARDS AND HONORS

**NAB Value Award (excellence for customers)** Prestigious award for exceptional contributions

**Star Performer Award - NAB** In recognition of outstanding performance

## LANGUAGES

- English** Proficient
- Hindi** Native