

# Saksham Bansal



+91-9990955372

[sakshambansal.ubs@gmail.com](mailto:sakshambansal.ubs@gmail.com)



Delhi, India

## SUMMARY

Data Scientist & ML Engineer with 6 years of experience delivering ML and analytics solutions across healthcare, credit risk, and financial services. Proven success in developing and deploying predictive models, credit risk models, autonomous AI workflows, and RAG-based systems. Key achievements include engineering clinical features, uplifting the model performance by 12-15%, and replacing vendor model with in-house model, saving on average \$12000 per quarter.

## SKILLS

**Programming:** Python, SQL, R, PySpark, SAS

**Frameworks:** PyTorch, Scikit-Learn, XGBoost, HuggingFace, Transformers, SHAP, Statmodels, FastAPI, Terraform

**Machine Learning/Deep Learning:** Ensemble Methods, Linear Models, RNNs, ANNs, Neural Networks, Optimization, Evaluation

**MLOps Tools:** Git, GitHub Actions, MLflow, Docker, CI/CD

**Cloud/Infra:** AWS (Lambda, S3 Bucket, EC2, ECS, IAM, CloudFront, API Gateway), Databricks

**LLM/GenAI:** BERT, GPT, LangChain, RAG, FAISS, ChromaDB, Ollama, OpenAI, Gemini, Observability

**Visualization:** PowerBI, R Shiny, Plotly

**Agentic AI:** LangGraph, OpenAI SDK, Crew AI, Agentic RAG, MCP

**Domain:** Credit Risk, Fraud Risk, Clinical Trials, Healthcare Insurance Claims, BFSI, Fintech

## WORK EXPERIENCE

### Cognitio Analytics

Mar 2025 - Present

Gurugram, India

#### Senior Data Scientist

- Built risk-adjusted cost-of-care models in PySpark to benchmark utilization and improve payer negotiation outcomes by 11%.
- Designed actual-vs-expected benchmarking system, which identified 22% high-cost outlier claims, supporting rate revisions.
- Developed 30-day readmission risk classification models achieving 87% precision to support value-based contracts.
- Engineered 20+ clinical features (ICD, MCD, DRG groupings and severity metrics), improving risk-adjustment fairness and improving model performance by 12–15%.
- Architected an Agentic AI solution using LangGraph reflect workflows to autonomously generate and execute Python code for analytical tasks, boosting productivity by 30%.
- Developed and deployed a real-time ML cost estimation app for the Malaysian insurance market using MLflow, Docker, AWS (Lambda, CloudFront, S3, ECS, EC2), and FastAPI with a custom web interface.

### EXL Services

Mar 2024 - Mar 2025

Gurugram, India

#### Consultant II - Credit Risk

- Built a default prediction model using fuzzy augmentation reject inference techniques to overcome selection bias issues, improving KS Statistic by 2%.
- Utilized XGBoost and logistic regression models to develop a First Party Fraud (FPF) model leveraging 12 months of applicant performance and bureau data to predict intentional defaulters. Explaining the outcomes of the models using SHAP to support compliance.
- Created a vintage analysis tracker to monitor risk across diverse portfolio segments, including FICO bands, marketing channels, and DTI bands.
- Monitored and validated vendor credit risk model scores in production using internal data, ensuring performance metrics such as KS, AUC, and PSI remained within acceptable thresholds.

### Incedo Inc.

Dec 2022 - Mar 2024

Gurugram, India

#### Data Scientist

- Led development of an R-Shiny dashboard for a pharma client, enhancing forecasting logic and reducing error variance from 50% to 1%.
- Fine-tuned a clinical-specific transformer model on medical notes to predict the likelihood of patient dropout, saving an average of \$1,800 per patient.
- Designed a Retrieval-Augmented Generation (RAG) medical chatbot using Gemini + FAISS, deployed via AWS Lambda, S3, and API Gateway.
- Implemented advanced structured query strategies for the LLM-powered chatbot, increasing output accuracy by 30% based on stakeholder feedback.

### IIFL Home Loans

Jul 2022 - Dec 2022

Gurugram, India

#### Data Scientist – Credit Risk

- Developed the scorecard model for various portfolios utilizing trade data and CIBIL attributes during applicant acquisition.
- Collaborated cross-functionally with product managers and sales teams to launch a data-driven customer retention strategy, reducing attrition by 18% over 3 months.
- Automated repetitive Excel tasks, reducing manual workload by 3 hours per day.

## **Motherson Sumi Infotech & Design Ltd.**

*May 2021 - Apr 2022*

*Delhi, India*

### *Functional Analyst - Data Science*

- Collaborated with stakeholders to gather business requirements and devised tailored analytical solutions to effectively address key business challenges.
- Utilized NLP techniques such as NER and Aspect-based sentiment analysis to analyse and extract valuable context from customer tweets, identifying brand perception, pain points, and areas for improvement.
- Built a data quality monitoring pipeline, cutting data integrity issues by 15%

## **NS Matrix Services Pvt Ltd.**

*Oct 2017 - Apr 2019*

### *Data Analyst*

- Coordinated closely with the programming team to prevent errors in survey data collection, ensuring the accuracy of the data used for analysis.
- Leveraged exploratory analysis to extract meaningful insights from the survey data.
- Conducted rigorous data quality checks, ensuring quality SPSS data deliverables.

## **EDUCATION**

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### **MBA**

*Jun 2019 - May 2021*

*University Business School, Panjab University*

### **Business Economics**

*Jun 2014 - May 2017*

*Aryabhatta College, Delhi University*

## **LANGUAGES**

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English [Native Proficiency], Hindi [Native Proficiency]