
Senior Data Scientist with **9+ years** of experience designing and deploying **scalable ML solutions** across diverse industries. Expertise in **predictive modeling**, **anomaly detection**, **natural language processing**, and **Generative AI**. Skilled in leading **cross-functional teams**, implementing **MLOps** best practices, and transforming complex data challenges into **actionable insights**.

CORE COMPETENCIES & TECHNICAL SKILLS

Business & Applied Analytics: AML Optimization, Credit Risk Model Development, Model Monitoring & Validation, Fraud Detection, Regulatory Compliance, Business Strategy & Growth, A/B Testing, Stress Testing, AI Strategy

Analytics & Machine Learning: Predictive Analytics, Propensity modeling, Marketing Analytics, Time-Series Forecasting, Feature Engineering, NLP, Generative AI, Retrieval-Augmented Generation (RAG)

Leadership: Cross-Functional Team Leadership, Project Management, Mentorship

Technology & Cloud: Python, SQL, SAS, PySpark, Databricks, AWS (Bedrock, S3, SageMaker), Power BI, Git, DataOps

KEY PROJECTS

- **Fraud & AML Risk Reduction (supervised learning, ensemble methods):** Led team of 3 to build XGBoost and random forest models; hands-on feature engineering and cross-validation reduced false positives by 20% and improved detection efficiency by 25%.
 - **NLP-Powered Insights Engine (NLP, transformer fine-tuning):** Built an NLP pipeline leveraging transformers to extract insights from unstructured text data, automating report generation and decreasing manual review effort by 40%.
 - **Credit Risk & Scorecards (Statistical Modeling):** Developed PD, LGD, and EAD models under Basel & IFRS9, leading to a 10% reduction in loan default rates, directly improving lending decisions.
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PROFESSIONAL EXPERIENCE

National Australia Bank (NAB), India

Senior Data Scientist – AVP

Jan 2023 – Present

- Led a team of data scientists in the end-to-end ML lifecycle for AML Optimization project, defining project roadmaps and ensuring timely delivery.
- Led the development of fraud monitoring frameworks, reducing false alerts by 20% and improving suspicious matter reporting (SMR) conversion rates by 25%, leading to improvement in regulatory compliance.
- Enhanced risk monitoring models (Application Scorecard) using machine learning to assess credit exposure and default risk, improving early-warning indicators and reducing potential financial losses; model accuracy improved by 20%.
- Developed AI-powered knowledge retrieval tool using RAG, enhancing decision-making efficiency by 15% in fraud analysis and compliance.
- Mentored Junior Data Scientists in NLP techniques, improving team efficiency by 15%.

EXL, India**Senior Data Science Consultant****Mar 2021 – Jan 2023**

- Led a team to work on NLP solutions using BERT for complaint analytics, incorporating text preprocessing, vectorization, and fine-tuning to identify key drivers of customer dissatisfaction, reduced unresolved issues by 20%.
- Designed and implemented advanced credit risk scorecard models using logistic regression and machine learning, leading to an 11% reduction in default rates and more accurate loan approval strategies.
- Established model monitoring processes, using statistical tests to detect population shifts and ensure regulatory compliance (e.g., Basel, IFRS 9).
- Built customer segmentation using frameworks based on behavioral and lifestyle attributes, supporting differentiated risk-based pricing and targeted retention strategies, which improved customer retention by 10%.
- Developed churn prediction and propensity models to identify high-risk customers and optimize cross-sell/up-sell strategies,
- Mentored Junior Analysts on model monitoring and validation.

Wipro – Noida, India**Data Science Analyst****Nov 2015 – Sep 2020**

- Managed end-to-end ML projects: Developed a churn prediction model (**XGBoost**) achieving 85% accuracy, driving \$1M revenue uplift.
- Built predictive models (Regression models) to identify operational inefficiencies, reducing defects by 20% and optimizing business processes.
- Developed Tableau dashboards, providing executives with real-time insights and improving reporting efficiency.
- Automated data extraction workflows using Python & SQL, reducing TAT and reducing 20% of monthly FTE hours in manual effort.

EDUCATION

B. Tech, Electronics & Communication Engineering |
Uttarakhand Technical University, Dehradun, India

Oct 2011-June 2015
