

PROFILE SUMMARY

- Overall 8+ years of experience across fraud, risk, and product analytics in fintech, crypto, and banking environments.
- Led end-to-end data science projects from use case framing to modeling, deployment, and performance monitoring.
- Built rule-based and machine learning systems for fraud detection, AML, customer churn, and behavioural risk scoring.
- Skilled at integrating risk, product, and ops workflows, enabling real-time decisions, smoother customer journeys, and measurable business impact.
- Strong hands-on expertise in Python, SQL, cloud data platforms, and modern experimentation stacks.
- Experienced in setting up data infrastructure, case management systems, and operational pipelines from the ground up.
- Proven track record of using analytical thinking and behavioral segmentation to drive adoption, reduce losses, and optimize conversion.
- Known for bridging technical depth with clear business communication, and for delivering in high-trust, high-ambiguity environments.

SKILLS & TOOLS

Risk, Product & Behavioural Analytics

Fraud Detection · Risk Scoring · Identity Verification · Transaction Monitoring · AML/KYC Analytics · Chargeback Analysis · Churn Prediction · Behavioral Segmentation · Funnel & Retention Analysis · Experimentation · A/B Testing · Causal Inference · KPI Design

Modeling & Machine Learning

Logistic Regression · Decision Trees · Random Forest · XGBoost · K-Means Clustering · Time Series Analysis (ARIMA) · Classification Models · Anomaly Detection (PyOD) · Feature Engineering · NLP (Sentiment Analysis, Entity Extraction) · Generative AI · Large Language Models (LLMs)

Programming, Infrastructure & Deployment

Python (Pandas, NumPy, scikit-learn, statsmodels, PyOD) · SQL · dbt · Snowflake · AWS (S3, Lambda, SageMaker) · Apache Spark · Redshift · Airflow · MLflow · Git · Jupyter Notebooks

Visualization & Reporting

Power BI · Tableau · Metabase · Preset · Excel · Streamlit

Collaboration & Delivery

Agile · Jira · Linear · Cross-functional Communication · Stakeholder Reporting · Product Strategy

PROFESSIONAL EXPERIENCE

SENIOR DATA SCIENTIST | SHAKEPAY | TORONTO, CANADA

Feb 2024 - Present

Project description:

Led the design and optimization of rule-based fraud and AML systems across identity, onboarding, and transaction flows — enabling real-time risk decisions and scalable operations. Partnered with product, engineering, and ops to drive experimentation, reduce friction, and deliver safer, smoother customer experiences.

Responsibilities:

- Designed and scaled foundational fraud and AML infrastructure — including transactional marts, risk metrics, operational dashboards, and streamlined data pipelines — to support real-time decisioning and long-term analytics.
- Designed and optimized case management workflows to improve data capture, investigation accuracy, and SLA tracking — reducing manual investigation time by 40% and improving labeled data capture by 90%.
- Led rule development across identity, transaction, and behavioural risk — tuning existing logic to reduce false positives and deploying new controls in response to evolving fraud patterns. Improved scam detection precision from ~65% to 95% and onboarding fraud precision from ~50% to 85%.
- Built rule-based AML risk scores for both personal and business accounts; supported EDD decisioning, developed internal customer risk scoring to flag high-risk users, and collaborated on AML audits, backlog resolution, and case analysis.
- Supported product launches end-to-end — from shaping data requirements and building ETL pipelines to sizing impact, enabling ops workflows, monitoring adoption through dashboards and behavioural data, analyzing fraud patterns, and running post-launch experiments to improve engagement and reduce drop-offs.
- Analyzed conversion, adoption, and drop-offs across key customer journeys and product flows; designed and ran A/B tests to guide decisions, improve engagement, and drive feature growth. Boosted Roundup feature adoption from 20% to 72% through targeted experimentation and behavioural nudges.
- Built self-serve tools and reusable queries to help ops, product, and compliance teams explore fraud patterns, monitor key metrics, and make faster, data-informed decisions — while aligning detection logic with frontline feedback and evolving regulatory requirements.

Tech Stack: Python, SQL, Snowflake, Amazon S3, DBT, Snowpark, Statsig, Metabase, Preset, Hex, Git, Notion, Linear

SENIOR DATA SCIENTIST | X-AXIS SOLUTIONS | TORONTO, CANADA

Mar 2021 - Feb 2024

Project description:

Led the development of a Fraud Detection and Prevention System (FDPS) for insurance, designing machine learning models to target distinct fraud patterns across claims, customer profiles, and transaction behaviours. Owned the full pipeline—from shaping data architecture to deploying production-ready models—focused on real-time detection and operational efficiency.

Responsibilities:

- Collected, cleaned, and structured raw transactional, behavioural, and profile data from internal insurance systems and third-party sources for model development and operational use.
- Built and deployed multiple machine learning models — including predictive classifiers, anomaly detection algorithms (PyOD), and clustering techniques — to detect fraud patterns across insurance claims.
- Combined individual models into a unified fraud detection pipeline to score transactions in real-time, improving fraud detection accuracy by over 20% while minimizing false positives.
- Engineered feature sets using client attributes, billing behavior, and claim histories; applied advanced techniques including NLP (for text notes), sentiment analysis, and entity recognition (AWS Comprehend, Google NLP) to enrich model signals.
- Designed and implemented end-to-end MLOps workflows — including model versioning, CI/CD integration, and monitoring — ensuring smooth deployment, reproducibility, and continuous updates of fraud models.
- Conducted controlled A/B testing and backtesting to validate the business impact of fraud detection models and underwriting improvements.
- Developed internal customer risk scores for underwriting support, enabling proactive flagging of high-risk individuals and businesses.
- Led a cross-functional team of 4 data scientists and engineers, managing timelines, reviews, model handoffs, and integration with DevOps and business teams.
- Created interactive Tableau dashboards to visualize fraud detection trends, model outcomes, and behavioral risk signals for key stakeholders.
- Documented model logic, tooling decisions, and pipeline architecture to ensure modularity, reusability, and compliance with internal audit standards.

Tech Stack:

Python, SQL, scikit-learn, PyOD, Apache Spark, K-means, Apriori, AWS (SageMaker, S3, EMR, Lambda, Comprehend), Google Natural Language API, Tableau, Git

DATA SCIENTIST | AXIS BANK | HYDERABAD, INDIA

Sept 2019 - Mar 2021

Project Description:

Worked on fraud and churn analytics for the credit card business at Axis Bank, focusing on identifying early signs of attrition and high-risk behavior. Built simple classification models and behavioural segments to support fraud investigation queues and customer retention strategies.

Responsibilities:

- Analyzed credit card transaction, payment, and service interaction data to identify early signals of customer churn and fraud risk.
- Built churn prediction models using logistic regression and decision trees in R and Python, enabling targeted interventions for at-risk customers and reduced churn by 15%.
- Developed rule-based fraud scoring logic to help prioritize investigation queues and reduce false positives in manual reviews.
- Segmented customer base by behavior and risk profile to support retention campaigns and fraud monitoring workflows.
- Created Power BI dashboards and Excel reports to track churn patterns, chargebacks, false positives, and response times across key segments.
- Collaborated with fraud operations and customer service teams to translate model insights into actionable playbooks.
- Documented analysis and modeling workflows using Jupyter Notebooks and internal documentation tools to ensure transparency and handoff readiness.

Tech Stack: Python, SQL, scikit-learn, Tableau, Excel, Jupyter Notebooks

SENIOR DATA ANALYST | GEMINI EDIBLES AND FATS PVT. LTD | HYDERABAD, INDIA

June 2017 - Aug 2019

Project Description:

Supported both marketing and operations analytics at a high-volume FMCG firm, with a focus on customer segmentation, campaign performance, and purchase process efficiency. Worked closely with sales, procurement, and factory teams to streamline reporting and ensure timely delivery of materials critical to daily operations.

Responsibilities:

- Led marketing and sales analytics for FMCG campaigns, focusing on customer segmentation, regional demand trends, and promotion timing.
- Built Excel-based performance models and campaign trackers, contributing to a 10% uplift in sales through improved planning and targeting.
- Analyzed multi-year sales data using SQL, SAP, and Excel to identify growth opportunities and optimize channel effectiveness.
- Developed standardized templates and automated reporting workflows to improve consistency and reduce manual effort across sales teams.
- Analyzed purchase order patterns across factories to identify delays, reduce manual entry bottlenecks, and improve coordination with vendors.
- Streamlined SAP-based procurement workflows by generalizing repetitive order formats and improving lead-time visibility for factory operations.

Tech stack: Excel, SQL, SAP, Power BI, Statistical Methods

EDUCATION

University of Texas, Austin - Post Graduate Program in Data Science and Business Analytics

July 2020- Aug 2021

Statistical Data Analysis, Natural Language Processing (NLP), Exploratory Data Analysis, Data Mining, Data Modeling, Data Engineering, Data Visualization

Western Sydney University, Sydney - Masters in Accounting

July 2016 - Aug 2017

Accounting, Finance, Law, Fraud Prevention, Forensic Accounting, Corporate Finance

Osmania University, India - Bachelor's of commerce (Hons)

June 2013 - July 2016

Statistics, Accounting, Finance, Law, Economics, Marketing