SAMBIT MALLIK

DATA SCIENTIST

sambitmallik121@gmail.com | https://www.linkedin.com/in/sambit-mallik-1523801a1/ | https://github.com/sambit-11

SUMMARY

Detail-oriented Data Scientist with an IT Master's degree and hands-on experience in analytics dashboards and churn prediction model deployment.Skilled in Python, SQL, Excel, and Power BI with strong abilities in data cleaning, feature engineering, and deriving business insights.Seeking an entry level role to apply ML and analytical skills in real-world projects.

SKILL

- **Programming & Data Tools: Python** (Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn, Plotly), SQL (Subqueries, Joins, Group By), Advanced Excel (Pivot Tables, XLOOKUP, Power Query), Power BI Dashboards.

- **Machine Learning & Statistics:** Supervised Learning (Random Forest, XGBoost, Gradient Boosting), Classification & Regression, Hyperparameter Tuning (GridSearchCV), Model Evaluation (ROC-AUC, F1-Score), Feature Importance.

- **Data Analysis & Engineering:** Exploratory Data Analysis (EDA), Data Cleaning, Preprocessing, Feature Engineering, Geospatial Analysis (Heatmaps, Hotspot Analysis).

- **Quantitative Finance & Deployment**: Production-ready APIs (Flask, Gunicorn), Docker Containerization, Git/GitHub, Credit Risk Modeling (PD, FICO Scoring).

PROJECTS

➤ Agent-Performance-Analytics

- Conducted end-to-end crime data analytics by cleaning, preprocessing, and integrating large-scale datasets using Python (Pandas, NumPy) to uncover trends and patterns in crime distribution.
- Developed interactive geospatial visualizations (crime heatmaps, hotspot analysis) to identify temporal and regional crime concentration, aiding strategic decision-making.
- Built a business-intelligence dashboard to report actionable insights, leveraging EDA and data engineering to support policy planning and crime prevention initiatives.

➤ Customer Churn Prediction & Model Deployment

- Developed an end-to-end churn prediction model using classification algorithms, performing data cleaning, feature engineering, and exploratory analysis to identify key drivers of customer churn.
- Evaluated model performance using metrics such as accuracy, precision, recall, and ROC-AUC, and optimized hyperparameters to improve predictive reliability.
- Deployed the trained model as a production-ready application with seamless input processing and real-time churn predictions for business decision-making.

EXPERIENCE

➤ JPMorgan Chase & Co. Quantitative Research Virtual Experience Program on Forage December 2025

- Completed a simulation focused on quantitative research methods
- Analyzed a book of loans to estimate a customer's probability of default
- Used dynamic programming to convert FICO scores into categorical data to predict defaults

EXPERIENCE

➢ **Lloyds Banking Group Data Science Job Simulation on Forage - December 2025**

- Completed a job simulation involving customer churn prediction for the Data Science & Analytics team at Lloyds Banking Group
- Developed and implemented a predictive model using random forest and other machine learning algorithms, achieving an ROC-AUC score of 0.82
- Conducted advanced data preprocessing, including handling missing values, encoding categorical variables, and feature scaling, utilising Python libraries such as pandas, scikit-learn, and matplotlib
- Performed comprehensive model evaluation and tuning, optimising hyperparameters with GridSearchCV and applied feature importance analysis to derive actionable business insights.

➢ **BCG Data Science Job Simulation on Forage - December 2025**

- Completed a customer churn analysis simulation for XYZ Analytics, demonstrating advanced data analytics skills, identifying essential client data and outlining a strategic investigation approach.
- Conducted efficient data analysis using Python, including Pandas and NumPy. Employed data visualization techniques for insightful trend interpretation.
- Completed the engineering and optimization of a random forest model, achieving an 50% recall rate in predicting customer churn.
- Completed a concise executive summary for the team, delivering actionable insights for informed decision-making based on the analysis.

EDUCATION

- Masters(IT) | Utkal University | 2023-2025
- Bachelors (Urban Planning) | Odisha university Of Technology & Research | 2017-2021
- Senior Secondary(Science) | Rajdhani Junior College | 2015-2017

CERTIFICATIONS

- PythonProgramming:MachineLearning, DeepLearning| Python
- ProfessionalCertificateof Agile and Scrum BusinessAnalyst FromUdemy
- MicrosoftExcel- Beginner to AdvancewithExampleFromUdemy