

DRIPTA SENAPATI

Assistant Director in HSBC

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SUMMARY

Data Scientist with 5+ years of experience in analytics domain. Has strong foundation in statistics with analytical and programming mindset. Proficient in developing robust solutions for business cases. Seeking opportunities to use my expertise in machine learning and technical tools to drive business value in global organizations

EXPERIENCE

- ❖ Assistant Director, HSBC Mar 2026
Kolkata, India
 - Defined product roadmap and analytical strategy by translating business requirements into scalable data solutions and measurable success metrics.
 - Mentored and guided analysts/data scientists, establishing best practices for model development, validation, and deployment to ensure high-quality deliverables.
- ❖ Senior Analyst, HSBC Mar 2024 — Feb 2026
Kolkata, India
 - Built and validated AML models (XGBoost, KNN, clustering) to classify high-risk vs low-risk customers.
 - Performed transaction monitoring, fraud pattern detection, and customer segmentation using PCA, K-Means, and statistical tests.
 - Conducted model impact analysis and ensured compliance with global AML frameworks. Developed scalable fraud rule engines and enhanced alert systems for early fraud detection.
- ❖ Analyst, HSBC Sep 2022 — Feb 2024
Kolkata, India
 - Designed and optimized risk-based AML thresholds across 10+ countries, reducing false positives and improving alert efficiency.
- ❖ Senior Associate, WNS Global Services Jan 2021 — Aug 2022
Gurgaon, India
 - Used NLP techniques to extract key biomedical information from research abstracts, improving data tagging efficiency.
 - Created a Python module for dynamic table extraction from PDFs and automated multi-format outputs for client delivery.
 - Conducted statistical analysis of structured and unstructured biomedical data using R and Python. Built an OpenCV-based module to detect medicine ingredients from packaging images.
 - Designed and deployed REST APIs for analytics workflows, scaling performance.
- ❖ Data Scientist, Objectsol Technologies Pvt. Ltd. Jan 2020 — Jan 2021
Kolkata, India
 - Developed backend statistical algorithms and ML models for software applications.
 - Built a crop recommendation model leveraging soil parameters (pH, Nitrogen, Potassium) and weather features (temperature, humidity).
 - Implemented an object detection system using YOLOv3 + OpenCV for real-time applications.

EDUCATION

- ❖ University of Calcutta 2018 — 2020
M.Sc. in Statistics, Statistics
Specialization: Multivariate Analysis
- ❖ University of Calcutta 2015 — 2018
B.Sc. in Statistics, Statistics

SKILLS

Financial Crime / AML (Domain Knowledge)	Risk-based modeling, Threshold tuning, Customer segmentation
Programming & Tools	Python, R, SQL, Flask, Shell scripting, Pandas, NumPy, Matplotlib, Seaborn, BigQuery, NoSQL DB
Machine Learning & Modeling	Linear Regression, Classification Models, XGBoost, KNN, K-means, Decision Trees, PCA, Clustering Techniques, Feature engineering and selection, Model validation, Deep Learning
Natural Language Processing	NER, Sentiment Analysis, Text Processing, Seq2Seq modelling for Text Generation
Deployment & Cloud	API development (Flask, NodeJS), GCP, AWS

ACHIEVEMENTS

Epidemiological model

Worked on a Covid-19 based project that applies SEIR epidemiological model to, that shows whether the lockdown in India is effective or not. Trying to fit LSTM model to predict the future pattern of Reproduction rate.

Chatbot Using Seq2Seq Model

Built a simple Chatbot using model LSTM RNN Seq2Seq). For now, it can chat like humans with meaningful sentences, and it can also tell weather of any place. Although it is a very basic one. (GitHub Link: <https://github.com/DriptaSenapati/ChatBot>)

Python Package

Created a python package on Covid-19 that can retrieve all the numerical data related to the COVID-19 spread in India.(PyPi Link: <https://pypi.org/project/covdata/>).

Statistics Chegg Expert

Worked part-time for 2 years as Chegg Expert by solving the statistical problems

LANGUAGES

English	❖❖❖❖❖	Bengali	❖❖❖❖❖
Hindi	❖❖❖❖❖		

WEBSITES AND SOCIAL LINKS

GitHub: <https://github.com/DriptaSenapati>
My Portfolio: <https://www.driptasenapati.com/>