

Dripta Senapati

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- **Career Objective:**

Passionate about **Artificial Intelligence, Statistics, NLP and Coding**. Looking forward to establishing a career as a Data Scientist or a Data Analyst. I have great analytical and programming skills besides having in-depth mathematical knowledge and sound knowledge about Computer. Having the ability to solve complex statistical problems and analyze the data within stipulated deadline.

Currently working for HSBC and have a total of 4 years of experience in Statistical Programming and Data Science field.

- **Work Experience:**

- **Senior Analyst – Compliance Analytics**

- ✓ **Company:** HSBC Kolkata
- ✓ **Period:** 23rd September 2022 - present
- ✓ **Job Description:**
 - Fraud detection analytics. Need to perform tests and pattern of customer to create fraud detection algorithms
- ✓ **What I do:**
 - Perform statistical analysis and tests to get insights of customer behavior
 - Create rules engines or models to capture fraud customers more efficiently
 - Segmentation of customers using unsupervised learning methods and statistical tests (e.g., PCA, K-means clustering, Mann-Whitney) to categorize customers, which helps in fraud behavior identification.
 - Performed model impact analysis, scrutinized customer behavior for more than 10 countries and optimize the model to set proper threshold to reduce noise and give proper fraud alerts.
 - Developed a preliminary model using **XGBoost and KNN** to reduce noise and cover maximum true positives in 3 countries, which is now under pipeline for deploying very small markets.

- **Sr. Associate Operations**

- ✓ **Company:** WNS Global Services
- ✓ **Period:** 8th February 2021 – 19th September 2022
- ✓ **Job Description:**

Develop proof of concepts and scalable solutions in Text Mining, NLP, Video, image analytics and Statistical Analysis to solve business problems.
- ✓ **What I do:**
 - Works as main **Data Analyst** in team in **Health Care** domain.
 - Created **Python Module to extract dynamic table from pdf files** and process them in different formats as per client request.

- Statistical Analysis of **structured/unstructured biomedical data** in R and Python software.
- Created python module to detect medicine ingredients from medicine cover image using **OpenCV**.
- **Developed and validated a NLP model that can detect different important tags from abstract data** of an article to some extent.
- Created end to end knowledge graph to facilitate certain problems for clients in a pharma project.
- **Developed R package** for development purposes and can be readily installed in system.
- Have built fast **REST APIs** to connect to frontend and made it scalable using Redis.

➤ **Data Scientist**

- ✓ **Company:** Objectsol Technologies Pvt. Ltd.
- ✓ **Period:** 3rd February 2020 - 5th February 2021
- ✓ **Job Description:**
It is a software-based company, successfully building apps for Android, iOS, IpTV. I must develop backend algorithms which are based on some mathematical models and some Machine Learning algorithm.
- ✓ **What I did:**
 - Had to build statistical algorithms for different use cases.
 - Created a **crop recommendation model** that can predict a crop based on suitable soil characteristics like pH, Nitrogen and Potassium and based on weather conditions like temperature and humidity.
 - Created Python Object detection module using Yolo V3 + OpenCV.

• **Technical Skills:**

- *Python:* Expertise in **Python** Programming. Expertise in automation and scripting in python.
- *Web:* **HTML, CSS, React, NodeJS, NextJS**
- *Backend Development:* Can develop optimized backend using python or **JavaScript**. **Flask & NodeJS** is mainly used to create API endpoints.
- *Cloud:* Have knowledge of setting up virtual machines and deploying any program in it.
- *Hive SQL, Oracle SQL*
- *R:* Have Good Analytical skill in R Software.
- *Machine Learning and Statistical Analysis (TensorFlow Only):*
 - **Regression Analysis:** Multiple Linear Regression, Support Vector Regression (SVR), Polynomial Regression
 - **Classification analysis:** decision tree, logistic regression
 - **Multivariate Analysis:** Principal Component Analysis, Principal Coordinate Analysis
 - **Neural Networks:** ANN, RNN, LSTM, Transformers.
 - **NLP:** Named Entity Recognition, Sentiment Analysis, Text Generation, Seq2Seq modelling (Some Basics).
 - **Model Development, Hyperparameter Tuning, Grid Search, Model Validation, K-Means Clustering.**

- MS Excel
- MS Word
- MS PowerPoint

- **Accomplishments:**

- 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>)
- Created a **python package** on Covid-19 that can retrieve all the numerical data related to the COVID-19 spread in India. This package has the power of filtering the data for user's choice and can visualize the death, recovered and confirmed cases. (PyPi Link: <https://pypi.org/project/covdata/>).
- Have built a website for COVID-19 in India that gives flexibility to users to see the data for varying filters and also some **graphical analyses** are also done in website. (<https://covdata.pythonanywhere.com/>)
- Have worked with a small start up to build an android app in flutter and developed end to end backend in JavaScript and NodeJS.
- Working on a **Covid-19** based project that applies **SEIR epidemiological model** to, that shows whether the lock down in India is effective or not. Trying to fit **LSTM model** to predict the future pattern of **Reproduction rate**.
- Attended **Virtual Experience Program** in Data @ANZ on **synthesized** transaction of bank having the daily transactions of all customers.
- Worked for 2 years as **Chegg Expert** by solving the statistical problems.

- **Education:**

- Post-graduation:
 - Subject: Statistics (Special paper: Multivariate analysis)
 - Institute: University of Kalyani
 - Pass out year: 2020
- Under-graduation:
 - Subject: Statistics
 - Institute: University of Calcutta
 - College: Asutosh College
 - Pass out year: 2018