

BISWAROOP MITRA

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GitHub: <https://github.com/biswaroopmitra>

Lean Six Sigma Yellow Belt: <https://udemy-certificate.s3.amazonaws.com/pdf/UC-ce0d847f-1f8b-4530-bbbc-12a897a3b123.pdf>

Summary

4 years of experience in Python, data science. Experienced in Django and Flask. Overall professional experience of 9 years 4 months. Data-driven science postgraduate with a lean six sigma yellow belt, problem-solving abilities, and experience in the agile process. Initiate and drive projects for business improvement. Experienced in providing client- and business-centric solutions with multiple multinational organisations. Excellent communication and interpersonal skills. Confident with meticulous attention to detail. Keen to undertake challenging tech-based projects to contribute towards a growing organisation.

IT Skills

Programming, Data analytics, Data Visualisation: Python | NLP | NLTK | CNN | LSTM RNN | PostgreSQL | MySQL | TensorFlow Keras | Predictive model development | PySpark | REST APIs | Pandas | Numpy | Scikit-learn | Matplotlib | Seaborn | Googletrains | Hyperparameter tuning | Data pre-processing, cleaning, wrangling | Feature engineering | Exploratory data analysis | OOP | Google Data Studio

Algorithms: Decision Tree | Ensemble | XGBoost | CountVectorizer | TfidfVectorizer | Regression | Naive Bayes | K-Means Clustering

Frameworks, IDEs: Django | Flask | Pycharm | Google Colab | Jupyter | SQL Shell (psql) | pgAdmin | Workbench

Certifications

Kaggle: Intermediate Machine Learning | Udemy: Lean six sigma yellow belt | NIIT: Programming in C

Project Handling Skills

Initiating and spearheading projects | Problem solving

Strengths

Logical and critical thinking, data analytics | Predictive modelling, international experience | Time management, working under pressure | Goal-oriented, strong call for action, highly motivated | Quick learner, adaptable, excellent written and verbal communication in English

Open-Source Projects

- 1) **NLP:** Took initiative to contribute Python functions for improved text pre-processing
- 2) Documentation review

Professional Experience

Virtusa, Hyderabad, India

May 2019 to Nov 2022

Senior Training Lead—KPO

I) Key data science initiatives

1) Sensitive text detection (NLP): Developing a deep learning model using word embedding and LSTM RNN to detect sensitive content in non-English and English text

Result: Achieved an accuracy of 92.31% using TensorFlow Keras. NLTK and googletrains were utilised for pre-processing the text-based data from ad content

2) Valid ad text classification (NLP): Developing a model to differentiate valid from invalid ad texts

Result: Achieved an accuracy score of 91.45% using MultinomialNB.

3) FPY predictive modelling: Leading the project and developing a machine learning classification model to obtain projections of the headcounts in training batches expected to meet the FPY count

Result: Achieved an F1 score of 94.29% using RandomForestClassifier with an imbalanced dataset. Improved FPY by ~35%

4) Quality risk projection: Innovated the idea. Leading the project and developing machine learning classification models using Python to predict error contribution from agents in BAU and 2 ramp-up groups

Result: Achieved F1 scores of 92.70% with the BAU group, and 90.74% and 89.61% with the ramp-up groups. Utilised RandomForestClassifier with multiclass and imbalanced datasets along with hyperparameter tuning

5) Image classification: Developing a deep learning classification model using TensorFlow Keras to identify sensitive content in image-based ads using a convolutional neural network

Solution: a) Compiling a dataframe of unique image URLs to utilise as image sources

b) Pre-processing image data using OpenCV

c) Developing the model, assessing and refining its accuracy, testing the model

II) Responsibilities

- Developing trained predictive models based on business requirements. Data pre-processing, cleaning, wrangling
- **NLP:** Translation of text data present in raw production data to English using Python
- Exploratory data analysis using Python libraries and clustering to gain insights on data trends
- Providing insights to stakeholders on the projected data obtained from predictive models for business decisions
- **Dashboard development:** a) Consolidating training datasets and developing a comprehensive dashboard
b) Utilising Data Studio for reporting and gaining detailed insights on agent-wise, batch-wise, and quarterly data

Uber, Hyderabad, India

May 2016 to Feb 2018

Quality Auditor

- Exploratory data analysis using Python libraries to identify trends in the areas of improvement of auditees

HSBC Bank, Hyderabad, India

Jun 2014 to April 2016

Contact Centre Sales and Services Rep

BioGenex Life Sciences, Hyderabad, India

May 2013 to Jun 2014

Application Specialist

Children's Brain Tumour Research Centre, United Kingdom

Sep 2009 to Dec 2010

Research Technician

Achievements

Virtusa

- Reduced the monthly occurrence of the top error-contributing category by 44% within 6 months
- Nominated by the DEV team's management to develop an FPY projection model for an additional LoB
- FPY predictive modelling led to the improvement of batch-wise FPY by 35% within 3 months
- Dashboard was nominated by the leadership for utilisation by an additional business segment of the KPO

HSBC Bank

- Diligence and Security: Identified and prevented fraudulent take-over of accounts

Education and Qualifications

MSc in Applied Biomolecular Technology

Sep 2008 to Sep 2009

The University of Nottingham, United Kingdom – Secured 58.22%

BSc in Bio-Technology

Jul 2004 to Dec 2007

Chemistry, Zoology, Bio-Technology

Dayananda Sagar College of Biological Sciences, Bangalore University,

India - **Secured First Class**

Involved biostatistics and biophysics

10+2 Science (C.H.S.E. Board)

Jul 2002 to May 2004

Maharishi College of Natural Law, Odisha, India – **Secured First Division**

10th (I.C.S.E. Board)

Mar 2002

Ruchika High School, Odisha, India – Secured 73.16%

Languages

English, Hindi