

DIGVIJAY RAUT

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EDUCATION

Northeastern University,

Master's of Science, in Data Analytics Engineering,

Relevant courses: Data management, Fundamental of Data Analysis, Computation and visualization, Data Mining

Government College of Engineering Amravati (GCOEA),

Bachelors in Technology, Information technology

Boston, MA, USA

Sep 2023 - May 2025

Maharashtra, India

Aug 2017 – Jul 2021

SKILLS

- **Programming:** Python, C++, Java, SQL
- **Data Science:** Statistical Analysis, Apache spark, Machine Learning Models, Regression, Visualization, Time Series, Neural Network, Advanced Excel, Python Library (pandas, sklearn, numpy, statsmodel, pytorch, tensorflow), Deep Learning, Feature Engineering, Hyperparameter Tuning, Model Evaluation, Data Wrangling, Data Cleaning, Predictive Modeling, Statistical Testing, Data Integration
- **Databases:** MySQL, MongoDB, PyMySQL
- **Data Visualization tools:** Tableau, seaborn, matplotlib, Quicksight
- **Cloud Skills:** Azure, Amazon Web Services (AWS)
- **Tools:** Jupyter notebook, Excel, Git, Jira, Azure Data Factory (ADF), Hive, Docker, Kubernetes, Apache Airflow, ETL Tools

PROFESSIONAL EXPERIENCE

Tata Consultancy Services (TCS),

Software Engineer

Pune, India

Jul 2021–Jul 2023

- **Enhanced Telecom Network Transition:** Developed software solutions for British Telecom optimizing the transition from 3G to 4G technology using Linux and Java which improved network reliability and increased customer satisfaction
- **CDR Data Processing:** Designed and deployed Java packages to process CDR (Call Detail Record) files for SMS, video streaming, and calling services refining billing plans and optimizing revenue management to improve billing accuracy for millions of users
- **NLP Model Development for Drug Safety:** Trained NLP models on the J&J database using Keyword Extraction to analyze drug names and side effects creating a comprehensive documentation system that improved drug safety monitoring and provided valuable insights for healthcare professionals and patients
- **Knowledge Transfer & Onboarding:** Led knowledge transfer sessions for new team members ensuring quick integration into the project and improving team productivity and cohesion by maintaining consistency in project objectives and workflows

ACADEMIC EXPERIENCES

Crime Data Analysis, Northeastern University, ([GitHub](#))

Sep – Dec 2023

- Investigated correlations among economic factors, earthquakes, COVID-19, and crime rates while visualizing overall crime trends from 2020 to the present year providing deep insights into complex societal dynamics and elucidating factors influencing crime trends over time
- Analyzed seasonal crime patterns identifying fluctuations in crime rates across different months and days of the week which informed targeted crime prevention strategies and resource allocation while forecasting future crime trends using predictive modeling and time series analysis enabling strategic planning and improved resource allocation for crime prevention

Customer Segmentation using RFM Analysis, Northeastern University, ([GitHub](#))

Sep – Dec 2023

- Optimized customer segmentation by employing K-means clustering to analyze RFM (Recency, Frequency, Monetary) scores, resulting in actionable segments that enhance targeted marketing strategies
- Developed insights from geographical data by analyzing order distribution across countries leading to targeted advertising strategies and market expansion opportunities based on regional buying behaviors and average order values while generating tailored marketing recommendations for each customer segment enhancing the effectiveness of marketing campaigns by ensuring that the strategies are highly relevant and personalized to the distinct needs and behaviors of each group

Sentiment Analysis on Amazon Reviews for Mobiles, GCOEA ([GitHub](#))

Jan – Apr 2021

- Conducted thorough data preprocessing including data cleaning, tokenization, and stop-word removal to prepare text data for accurate sentiment analysis using a supervised machine learning model determining if reviews had positive or negative sentiment and then displayed the results to admin for a comprehensive comparison of key mobile features such as battery and camera
- Created an interactive admin interface that displays performance graphs for specific features such as camera quality providing an intuitive overview of feature ratings across various mobile devices and enhanced the sentiment analysis model by implementing feature extraction techniques such as TF-IDF, N-grams, and Count Vectorizer achieving 91.04% accuracy with Logistic Regression to effectively classify mobile reviews