

# Parjita Munshi

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## EDUCATION

### Master of Science in Information Systems

Sep 2022 - May 2024

Northeastern University, Boston, MA | GPA: 3.7 / 4.0

Coursework: Data Science Engineering Methods and Tools, Advance Data Science/Architecture, Program Structure and Algorithm

### Bachelor of Engineering in Information Technology

Aug 2016 - Aug 2020

Gujarat Technological University, Gujarat, India | GPA: 3.7 / 4.0

Coursework: Artificial Intelligence, Database Management Systems, Data Structure, Data Compression and Data Retrieval

## TECHNICAL SKILLS

- Programming: Python, SQL
- Machine Learning: Classification, Regression, Association, Clustering, Feature Engineering, Boosting, CNN
- Statistical Methods, Data Analysis
- Data Science Libraries: NumPy, Pandas, Scikit Learn, Keras, Matplotlib, Seaborn, TensorFlow
- Visualization Tool: Tableau, MS Excel, Power BI
- Git, JIRA, Bitbucket, Confluence, PowerApps

## RELEVANT PROJECTS

### Cardiovascular Disease Detection

- Calculated and interpreted evaluation metrics such as **Area Under the Receiver Operating Characteristic Curve (AUC)**, **Sensitivity**, **Specificity**, **Positive Predictive Value (PPV) or Precision**, **Negative Predictive Value (NPV)**, **95% Confidence Interval (CI)**, and **Calibration Analysis**, to comprehensively assess the accuracy and reliability of the cardiovascular disease detection model
- Conducted thorough evaluation of **Random Forest** and **XGBoost** machine learning algorithms for CVD detection, comparing their performance on relevant metrics. Identified XGBoost as optimal choice, demonstrating superior accuracy and effectiveness in identifying cardiovascular diseases with a 5% increase in precision and 10% decrease in false negatives
- Leveraged ensemble techniques, such as **Ada Boost**, **Cat Boost** and **Logistic Regression** to improve model performance and capture complex interactions among features

### Political Violence and News Analysis Nigeria

- Integrated **Python** libraries for news analysis, including **Natural Language Toolkit (NLTK)** for **sentiment analysis**, and **Scikit-learn** for **correlation analysis** with political violence event types, providing stakeholders with actionable insights to address political violence effectively
- Performed data analysis with **Matplotlib** and **Seaborn** to visualize the violence profile, common Event Types, and actor risk, while leveraging **Geopandas** and **Folium for geospatial analysis** to identify hotspots of political violence
- Executed **data preprocessing** and **cleaning** with the use of **Pandas** and **NumPy**, ensuring the creation of high-quality datasets for the analysis of Political Violence in Nigeria

### Amazon Review Analysis Project

- Spearheaded web scraping of over 5000 Amazon product data using a scraping tool, showcasing expertise in **Extract, Transform, Load (ETL) processes**, **data visualization**, and **statistical methods**
- Investigated advanced **Natural Language Processing** techniques, including a highly accurate review analysis model and a **Naïve Bayes Algorithm**, resulting in sentiment classification and valuable insights
- Utilized sentiment analysis techniques to optimize the review distribution rate by 10% for relevant product reviews, contributing to improved customer engagement and satisfaction

## PROFESSIONAL EXPERIENCE

### Graduate Research Assistant

May 2023 – Present

Northeastern University, Boston, MA, USA

- Conducted comprehensive **data cleaning** and **transformation** on a large-scale dataset of 2,326,218 rows, then implemented a robust **Random Forest** and **Boosting-based** predictive model achieving 95% accuracy in classifying patient's condition

### Front-End Developer

Feb 2022 - Jun 2022

AV DEVS Solutions, India

- Utilized the **Duda** platform to craft visually appealing and user-friendly websites for a user base of over 50,000, resulting in enhanced online presence and customer engagement. Designed a user guide that led to a 50% increase in visitor satisfaction and delivered 5 websites with **reusable code**, ensuring **optimal performance** across multiple projects

### Junior Software Developer

Jun 2020 - Jul 2021

ekZero Enterprise Software Services, India

- Developed 10+ projects using **HTML**, **CSS**, **SASS**, and **Bootstrap** with **Angular JS** and **React JS**, delivering fully responsive websites with exceptional UI for mobile and web. Actively contributed to an agile environment, participating in stand-ups, user story tracking, and **sprint planning**, showcasing effective **teamwork** and project success