

Maisha Mumtaj

Email: mumtaj.stu2017@juniv.edu — Phone: +8801644498374

LinkedIn: www.linkedin.com/in/maisha-mumtaj-a97818200 — GitHub: <https://github.com/Maishaaaa>

Education

Bachelor of Science in Statistics and Data Science

February 2018 - December 2022

Jahangirnagar University, Savar, Dhaka, Bangladesh

CGPA: 3.25/4.0

Relevant Coursework: Probability, Computer programming, Numerical analysis, Linear algebra, Calculus, Demography, Quality control, Statistical inference, Data Processing with Statistical software, Multivariate Analysis, Econometrics, Time series analysis, Stochastic Processes, Statistical Simulation, Machine Learning, Data mining, Categorical Data Analysis, Bioinformatics.

Activities: Volunteered and held a leadership position in three university clubs. Attended different cultural and social activities and Programming Competitions arranged by the department.

Project Title: Sentiment analysis with text mining: a study from the newspaper contents of Bangladesh.

Research Experience

Research Assistant

May 2023 - Present

Centre for Development Evaluation

- Collaborated with a team to develop machine learning models for predictive analytics in healthcare.

- Conducted statistical simulations to improve accuracy in predictive models using STATA.

- Published research findings in *International Journal of Science and Development-IJSDev*.

1.<https://ijsdev.com/association-between-coronary-heart-disease-and-tobacco-consumption-in-bangladesh/>

2.https://ijsdev.com/wp-content/uploads/2024/08/Final-Paper-Manuscript-240101-005_10go.pdf

Independent Research

November 2023 - April 2024

Title: Face detection with MTCNN using DenseNet for improved security

-Combined MTCNN and DenseNet to improve face detection's accuracy and efficiency, overcoming traditional methods' limitations.

-It employs an ensemble technique that integrates MTCNN for detection, DenseNet for feature extraction, and SVM for feature classification to enhance performance across diverse datasets.

-Highlights computational trade-offs in face detection algorithms, emphasizing the need for further optimization for real-world performance.

Working Experience

Contributor, Anannya Magazine

December 2022 - Present

- Scientific and statistical content writing for a renowned fortnightly magazine.

- Making a significant impact on women's health and hygiene within the community.

Field Enumerator

August 2019 - February 2020

SANEM-South Asian Networking for Economic Modeling

- Collaborated with the team to get data on the income and expenditure of Garment workers in Bangladesh.

- Estimated the weekly expenses of the respondents.

Projects

Project Title: Sentiment analysis with text mining: a study from the newspaper contents of Bangladesh
June 2023- May 2024

- Developed a machine learning model using Python to get the web scraping data for the newspapers.

- NLP methods such as tokenization, lowercasing, and lemmatization were applied to preprocess the text data for accurate sentiment analysis.

- Implemented machine learning algorithms such as Random Forest, Naive Bayes, and k-means classifier algorithms and achieved 95% The Python packages used in this study include: BeautifulSoup - for web scraping and parsing HTML content, Scrapy - for web scraping and data extraction, TextBlob - for sentiment analysis and computing sentiment scores, SpaCy - for natural language processing tasks, scikit-learn - for implementing machine learning algorithms and clustering techniques, NLTK (Natural Language Toolkit) - for various text preprocessing tasks.

Skills

Programming Languages: Python, R, STATA, Minitab, SPSS, Latex, C programming

Packages: Python: BeautifulSoup, Scrapy, TextBlob, SpaCy, scikit-learn, NLTK.

R: ggplot, ggplot2, dplyr

Data Analysis: Machine Learning, Statistical Modeling, Data Visualization, Simulation.

Leadership & Volunteering

Vice President, Jahangirnagar University Higher Study Club

Sep 2022 - May 2023

-Organized more than 30 workshops, seminars, and symposiums on higher study for 1500+ general students of Jahangirnagar University.

-Worked with various institutions, including the US embassy, and worked as a team leader.

-took seminars and sessions on research methodology, research programming, and English proficiency among club members.

Convener, Higher study 360 arranged by Jahangirnagar University Higher Study Club (JUHSC) August 2023

- Organized a flagship program of Jahangirnagar University Higher Study Club for around 200 students, which included scholarships and tips for students from all over the country.

Youth Social Leadership, funded by USAID, developed by NORC at the University of Chicago and New York University, in collaboration with Rupantar and Jahangirnagar University **March 2020**

- Completed a rigorous 14-week program on social leadership and community impact for leadership training.

- Participated in targeted tolerance seminars that tackled topics like hate speech, extremism, and rumors.

- Acquired vital abilities in community involvement, conflict resolution, and leadership.

- Worked on social justice initiatives with peers and international experts, encouraging discussion and action on urgent social issues.

Achievements (Stipend and Scholarships)

- University student stipend for academic excellence (both for first and second-year results).

- Government Scholarship for Outstanding Results in Secondary School Certificate Exam and Junior Secondary School Certificate Exam.