

Md Mehedi Hasan

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CAREER OBJECTIVE

Master's student in Computational Social Systems with hands-on experience in Python programming, data processing, and technical system support. Skilled in building machine learning models, developing technical prototypes, and supporting digital workflows. Strong interest in AI enablement, automation, and translating technical concepts into practical business solutions.

SKILLS

Python, SQL, Pandas, NumPy, Matplotlib, Scikit-learn, PyTorch Regression (Linear, Logistic), Decision Trees, Random Forest, Clustering (K-Means), PCA, Time series data analysis, Data Cleaning, Data Processing, Feature Engineering Model Development & Evaluation Exploratory Data Analysis (EDA).

WORK EXPERIENCE

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| Green Signal Technology
Junior Technical Data Assistant | Dec 2015 - Feb 2019
<i>Dhaka</i> |
| <ul style="list-style-type: none">Supported data handling, system logs, and technical records for operations.Assisted in organizing and maintaining structured technical datasets.Performed basic troubleshooting using data insights and system outputs.Maintained documentation for system configurations and updates. | |
| VAAANINFRA
Project Engineer | Aug 2021 - Feb 2022
<i>Dhaka</i> |
| <ul style="list-style-type: none">Supported technical projects through data collection, tracking, and documentation.Maintained project-related data and reports for internal stakeholders.Assisted with task coordination and progress monitoring across project phasesWorked with tool-based systems to support operational efficiency | |
| FENDONUS LIMITED
Data Engineer | Mar 2022 - Dec 2022
<i>Dhaka</i> |
| <ul style="list-style-type: none">Worked with application data logs to track system issues and understand recurring errors.Used basic Python scripts (Pandas) to organize and inspect datasets when debugging problems.Supported testing of system features by checking outputs and comparing expected vs actual resultsOccasionally explored simple data patterns (e.g., user activity or errors) to support decision-makingDocumented fixes and common issues to help the team handle repeated problems faster | |

PROJECTS

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| A Smart Polluted Water Overload Drainage Detection and Alert System
Publication | May 2021 - May 2021
<i>Cairo, Egypt</i> |
| <ul style="list-style-type: none">Developed an IoT-based system for real-time monitoring of drainage conditions.Published findings in IEEE Xplore: https://ieeexplore.ieee.org/document/9447664 | |
| A Computer Vision System for the Categorization of Citrus Fruits Using Convolutional Neural Network
Publication | Aug 2021 - Aug 2021
<i>Bandung, Indonesia</i> |
| <ul style="list-style-type: none">Created a computer vision system using CNN for efficient fruit categorization.Published findings in IEEE Xplore: https://ieeexplore.ieee.org/document/9501790 | |

Spatio-Temporal Data Reconstruction (TU Graz) 2025

- Keywords: Time Series, KNN, IDW, Interpolation, Data Imputation
- Problem: Missing full time-series data for one location
- Method: Used spatial + temporal techniques (KNN, IDW, Fourier, interpolation)
- Solution: Reconstructed missing data with improved smoothness and accuracy

Gender Bias in Book Reviews (TU Graz) 2024

- Keywords: NLP, Sentiment Analysis, Pandas, TextBlob, Statistical Testing
- Problem: Detect gender bias in book ratings and review text
- Method: Data preprocessing, sentiment analysis, TF-IDF, statistical tests (t-test, Mann-Whitney) S
- Solution: Compared ratings and review patterns across author genders

Smart Export Gateway (Digital Platform Concept) (TU Graz) 2024

- Keywords: Data-driven system, AI matching, data integration, platform design
- Problem: SMEs lack affordable tools for global market access and matchmaking
- Method: Used open datasets (trade, tourism, economic data), platform modeling
- Solution: Designed a prototype platform with AI-based matchmaking & analytics

Spatial Conflict Modeling (Agent-Based Model) (TU Graz) 2025

- Keywords: Agent-Based Modeling, Simulation, Python (Mesa), Data Analysis
- Problem: Understand how mobility affects conflict between groups
- Method: Built simulation with agents interacting via Points of Interest (POIs)
- Solution: Showed higher POI density reduces conflicts and stabilizes groups

Superheroes vs Villains Prediction (Data Mining Project) 2025

- Keywords: Machine Learning, Random Forest, Regression, EDA
- Problem: Predict win probability based on character features
- Method: Data cleaning, feature encoding, model training (Linear Regression, Random Forest)
- Solution: Built prediction pipeline and evaluated model performance (RMSE, R²)

Global Energy Trade Visualization (Visual Analytics) 2024

- Keywords: Data Visualization, Python, Interactive Dashboard, Data Processing
- Problem: Complex global trade data difficult to analyze in static format
- Method: Processed large datasets and built interactive visualization tool
- Solution: Created dynamic map for exploring trade relationships over time

EDUCATION

[Graz University of Technology](#)

Sep 2024 - Present

MSc Computational Social Systems

[Daffodil International University](#)

Aug 2015 - Aug 2020

BSc Computer Science & Engineering