

## S M Asaduzzaman

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**Address:** Mirpur, Dhaka, Bangladesh-1216

### Work Experience

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#### Research Manager

*(January 2022 -December 2023)*

##### Time research & innovation

- Over 3 years of expertise in Management Information Systems (MIS), research, and Monitoring, Evaluation, and Learning (MEL) across sectors including cultural development, neurodivergent education, telemedicine, and disease prediction systems.
- Successfully authored and secured 5 project proposals, receiving funding from government ministries and private donors.
- Excelled in report writing for projects on Cultural Heritage Conservation, Pottery Industry Preservation, Bhawaiya Folk Music, and Neurodivergent Education Systems, with comprehensive documentation of survey data, analysis, and project milestones for stakeholders and donors.
- Proficient in journal article development to established standards, with expertise in GIS, SPSS, Python, and advanced statistical data analysis.
- Published 3 research papers, including a notable study on telemedicine, machine learning, and data analysis, contributing valuable insights to the field.
- Applied strategic tools and methods that increased team productivity by 30%, leading to the highest number of research submissions to reputable journals and conferences.
- Experienced in designing and developing research methodologies, including applying for ethical clearance from the Bangladesh Medical Research Council (BMRC) to ensure rigorous compliance with research ethics and standards.

#### Research Associate

*(December 2020 - December 2021)*

##### Time research & innovation

- Assisted the team leader in Writing the 1 Research paper, 2 Funding Applications, Designing the 1 IoT Product,
- Worked in Machine learning for Image processing in 1 Online attendance and making the pitch deck for Government Authorities and Private investors. Implemented research procedure, (UI/UX) design for the WHA website and Tri Portfolio and analyzed the market scenario for prototyping the 2 new products.

#### Research Engineer

*(March 2019 - November 2020)*

##### NRB Group Co, Ltd.

- Conducted in-depth research and analysis focused on website development and market trends within NRB Group Co, Ltd.
- Contributed to the design and implementation of UI/UX enhancements to optimize user experience on company websites, Played a key role in identifying emerging technologies and trends relevant to the company's business domain, facilitating innovation and adaptation.
- Spearheaded the end-to-end website building process, from initial wireframing and design to final deployment, ensuring alignment with business objectives and enhancing brand visibility online.

**Tools:** Google Collab, Microsoft Office, Google Suite, Jupyter Notebook, Power BI, Figma, Endnote, Heroku, GitHub

**Languages:** Python, R, MySQL, C++

**Techniques:** Research Methodology, Research Design, Website Design, regression Analysis, Classification, Image Classification, Anomaly detection, Data Modeling, Database, SQL Query, Time Series Analysis, IoT

## SKILLS

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**Analytics Tools:** SPSS, Tableau, Power BI, Google Sheet, Excel

**Other Tools:** Google Collab, Jupyter Notebook, GitHub, SurveyCTO, Figma, WordPress, Database Design, Android App, Docker

**Languages:** Python, SQL, R, HTML, CSS, C++, Flask

**Techniques:** Data Scrapping, Data Preparation, Data Visualization, Machine Learning, Data analysis, UI/UX

**Algorithm:** LLM, Linear Regression, Logistics Regression, Decision Tree (Entropy, Gini), Random Forrest, ANN, Xgboost, CNN, UNET

## MAJOR PROJECTS

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### **An Online-Based Platform to Find the Maternal Risk /**

( **Skills:** *Python, Pandas, Numpy, Matplotlib, Scikit Learn, Flask, Docker, Render*)/ [Website](#) (2024)

- Using 6 algorithms the dataset is analyzed and the Random Forrest machine learning model is used to predict Maternal Risk Considering the parameter and then displaying the prediction with infinite testing on the website

### **Cultural Heritage Conservation and Assessment Project for Jatrapala in Manikganj, Bangladesh |**

( **Skills:** *SPSS, Excel, Python, Data Preparation, Data Visualization, Machine Learning, GIS, GitHub, Survey Design, Report Writing*) (2024)

- The Cultural Heritage Conservation Project in Manikganj, specifically 3 areas to utilize advanced analytics and real-time surveying technology, including DcoTrack, to assess and preserve the endangered Jatrapala Intangible Cultural Heritage in Bangladesh.

### **Sales Data Analysis Project for Confectionery Items of a reputed company | [Smart Dashboard](#)**

(Skills: Power BI, Data Preparation, Data Visualization, Sales Forecasting, Report Writing) (2024)

- Created dynamic, interactive dashboards in Power BI to monitor real-time sales metrics, inventory levels, and regional performance, empowering the sales team to make timely, data-driven decisions.
- Leveraged Power BI's forecasting features to project future sales trends, aiding the company in optimizing stock management and identifying key opportunities for growth.

### **Pottery Industry Preservation and Gap Analysis Project in Dhaka Division, Bangladesh /**

( **Skills:** *SPSS, Excel, Python, Data Preparation, Data Analysis, GIS, GitHub, Survey Design, Report Writing, Training of Trainers – TOT*)/ (2023)

- Led the Pottery Industry Preservation and Gap Analysis Project in Dhaka Division, utilizing the DcoTrack survey system to assess and enhance convenience for the pottery community. Successfully identified and addressed gaps in preservation, resulting in a 30% increase in cultural protection and efficient data collection, storage, and analysis.

### **Cultural Heritage Conservation and Assessment Project for Bhawaiya Folk Music in Rangpur, Bangladesh|**

( **Skills:** *SPSS, Excel, Python, Data Preparation, Data Visualization, Machine Learning, GIS, GitHub, Survey Design, Report Writing*) (2023)

- The project aims to significantly broaden opportunities to preserve Bangladesh's traditional music culture, specifically focusing on Bhawaiya folk tunes in the Rangpur region.

## **An Online-Based Diabetics Prediction System that can forecast diabetes disease effectively /**

( *Skills: Python, Pandas, Numpy, Matplotlib Scikit Learn, Flask, Docker, Render*)/ [Website](#) (2023)

- Using Random Forrest machine learning model to predict Diabetes Considering the parameter and then displaying the prediction with infinite testing

## **Real-Time Sign And Speech Converter For Hearing-Impaired People /**

( *Skills: Python, CNN,Keras, Arduino, Raspberry Pi*) (2018)

- A Bidirectional Communication System For Hearing-impaired people using image processing and a VR module. The project was awarded the Dean's Award for significant innovative ideas among 150 *Capstone Projects*.

## **PUBLICATION**

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- Inzamamul Alam, Md Samiullah, SM Asaduzzaman, Upama Kabir, AM Aahad, Simon S Woo “**MIRACLE: Malware image recognition and classification by layered extraction**” Data Mining and Knowledge Discovery, Springer Nature Link.
- Shah Siddiqui, Elias Hossain, S M Asaduzzaman, Sabila Al Jannat , Taseen Niloy, Wahidur Rahman, Shamsul Masum, Adrian Hopgood, Alice Good and Alexander Gegov “**Analysing and Identifying COVID-19 Risk Factors using Machine Learning Algorithm with Smartphone Application**” 6th International Conference on nventive Sysems and Control ICISC 2022
- S. A. Khan, S. M. Asaduzzaman, A. Debnath, and M. Hossain, “**An Efcient Sign Language Translator Device using Convolutional eural Network and cusomized ROI egmentation,**” 2019 2nd International Conference on Communication Engineering nd Technology.
- Al Amin; Hongjie Ma; Md. Shazzad Hossain; Nasim Ahmed Roni; Erfanul Haque; S M Asaduzzaman; Redwan Abedin; Alif B Ekram “**Industrial Product Defect Detection Using Custom U-Net**” International Conference on Computer and Information Technology (ICCIT)
- Elias Hossain; Wahidur Rahman; Alif B Ekram; Redwan Abedin; Nasim Ahmed Roni; Erfanul Haque; S M Asaduzzaman; Md. Shazzad Hossain “**Hybrid Machine Learning model for A Next-Generation Ecofriendly Travelling and Guides to Reduce Carbon Emissions**” International Conference on Computer and Information Technology (ICCIT)

## **EDUCATION**

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### **Jahangirnagar Univesity (Dhaka)**

Masters in Applied Statistics and Data Science ( 2023 )

**CGPA:** 3.88

### **American International University-Bangladesh (AIUB) (Dhaka)**

Bachelor of Science in Electrical and Electronic Engineering (2018)

**CGPA:** 3.96

**Award:** Academic Scholarship; Dean's List; Dean's Award for Capstone Project; *Summa Cum Laude*

## **REFERENCE**

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