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| **REZAUL HAQUE** | * +8801314996147 |
| * rezaulh603@gmail.com |
| * [Rezaul Haque](https://scholar.google.com/citations?user=wi2kfzYAAAAJ&hl=en&authuser=1) |
| * [RezaulHaque](http://www.github.com/rezaul-h) |
| * [Rezaul Haque](http://www.linkedin.com/in/rezaulhaque/) |

**Education**

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| **B.Sc. in Computer Science and Engineering**  **East West University**   * **CGPA:** 3.07 out of 4.00 * **Thesis:** Multi-class sentiment analysis on Bengali Facebook Comments using NLP, ML and DL approach | Sept 2017 - Jan 2022 |

**Work Experience**

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| **BJIT Limited**  **Software Engineer – Trainee (iOS)**   * Trained on iOS development, AWS Cloud Computing, Scrum, Version Control, Software Design Patterns, Task Management Tools, Soft Skills | Nov 2022 - Feb 2023 |
| **Creatrix Soft Tech Ltd**  **Junior Web Developer**   * Managed SQL Server Database and developed complex queries * Reviewed, analyzed, developed, and modified web applications * Followed best software development practices to ensure high-quality product * Designed, developed and maintained enterprise-class web applications in ASP.NET technologies (jQuery, AJAX, ASP/HTML, CSS, C#) under Project Manager | Feb 2022 – Oct 2022 |

**Key Projects**

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| **Research Projects** |
| * **Crypto Stock Trend Prediction (**[**GitHub**](https://github.com/rezaul-h/crypto-price-and-stock-trend-prediction)**):** Built an algo trading system on crypto currencies (Bitcoin, Ethereum, Lit and BNB) that can help traders identify the stock trends and take Buy/Sell decision   **Worked Modules:**   * Performed exploratory data analysis and feature engineering on a collected historical crypto stock data * Developed a crypto price and stock trend prediction system * Performance of the system was evaluated on the basis trading indicators and evaluation metrics |
| * **Song Lyrics Toxicity Prediction (**[**GitHub**](https://github.com/rezaul-h/Lyrics-Toxicity-Detection)**):** Applied Several ML/DL algorithms to predict whether lyrics of a song represents toxicity or not   **Worked Modules:**   * Applied text preprocessing to reduce the high dimensionality problem * Utilized feature extraction and embedding techniques to extract text features * Trained ML/DL algorithms to predict lyrics toxicity with an accuracy score of 94% |
| * **Jute Leaf Disease Prediction (**[**GitHub**](https://github.com/rezaul-h/jute-disease-prediction)**):** DL based solution to automatically detect jute disease   **Worked Modules:**   * Collected 1805 images of 3 type of jute leaf: Healthy and diseased with Powdery Mildew, Yellow Mosaic * Applied Image processing and augmentation to enhance the quality of the images * Trained DL algorithms with K-fold cross validation that predicts the disease with 99% accuracy score |
| * [**Hybrid**](https://github.com/rezaul-h/Brain-Tumor-MRI-Classification) **Recommendation System (**[**GitHub**](https://github.com/rezaul-h/Hybrid-Reccomender-System)**):** Built a Hybrid collaborative filtering movie recommender using matrix factorization algorithms   **Technologies Used:**  Scikit Surprise,KNN (Baseline, Means, ZScore), SVD, SVD++, SGD, Slope One, Baseline Only, NMF, Co Clustering |
| **Web/Mobile Applications** |
| * **Infinite News App (iOS):** Built a real time news application that fetches news using News API and lets the user bookmark news articles of their likeness   **Technology:** Xcode, UiKit 14, Swift 5, SQLite, Core Data  **Worked Modules:**   * Fetched data from API and cached it into Core Data and replaced the older cached data with the new one * Filtered the news into several categories from the cached data * Implemented functionalities such as pull to refresh, pagination, select and search news, and swipe actions |
| * **Skillomy E-learning Application:** Built a web application-based e-learning management system with a user-friendly platform for students to access educational resources and for instructors to sell courses   **Technology:** HTML, CSS, Bootstrap, Python, Django, SQLite3(SQLiteStudio)  **Worked Modules:**   * Designed and developed admin panel, customer panel, inventory management, cart module, payment gateway, transaction report, authorization and authentication module * Products inventory, order and invoice processing system and e-mailing the reports to customer |
| * **Rice Weed Detector:** An android application that detects the class of rice weed leaf using Artificial Intelligence   **Technology:** Android Studio, Python, TensorFlow Lite, TensorFlow  **Worked Modules:**   * Collected 4,346 images of rice weed from all over Bangladesh and categorized them into 11 distinct classes * Utilized highest performing model to create an android application that can predict the actual class of rice weed with an accuracy of 98% |
| **Biomedical Projects** |
| * **Colonoscopy Polyps Detection (**[**GitHub**](https://github.com/rezaul-h/Colonoscopy-Polyps-Detection)**):** Applied pretrained transfer learning models to detect polyps from colonoscopy images. |
| * [**Brain Tumor MRI Classification**](https://github.com/rezaul-h/Brain-Tumor-MRI-Classification) **(**[**GitHub**](https://github.com/rezaul-h/Brain-Tumor-MRI-Classification)**):** Built a transfer learning-based model that would classify if subject has a tumor or not based on MRI scan using bounding box |
| * **White Blood Cell Identification (**[**GitHub**](https://github.com/rezaul-h/Machine-Learning-Basics/blob/main/BloodCellDetection/Blood%20cell%20detection%20from%20image.ipynb)**):** Used CNN and OpenCV object detection techniques to localize and classify the white blood cell subtypes (Eosinophil, Lymphocyte, Monocyte, and Neutrophil) with 98% accuracy. |

**Technical Skills**

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| **Specialty** | Data Structures & Algorithm, Data Visualization, Data Analytics, Semantic Sentiment Analysis, Time Series Analysis, recommendation Systems, Image Processing, Business Analytics, Hyper-parameter Tuning, Statistical Analysis, Predictive Analysis |
| **Languages** | Python, Swift 5, JavaScript, PHP, C++, HTML, CSS, Bootstrap, SQL, NoSQL, Flask, Django |
| **Technologies** | UIKit, NumPy, Scikit-Learn, SciPy, TensorFlow, Keras, Pandas, NLTK, SpaCy, BeautifulSoup, Seaborn, OpenCV |
| **Tools** | Github, Redmine, Jira, Xcode, VS code, Anaconda, Jupyter, Colab, Spyder, Pycharm, MATLAB |

**Research Interest**

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| Deep Learning, Biomedical Image Segmentation, Time-Series Analysis, NLP, Recommendation System, Machine Translation, Generative Adversarial Network |

**Research Works**

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| **A Comparative Analysis on Suicidal Ideation Detection Using NLP, Machine, and Deep Learning | (**[**DOI**](https://doi.org/10.3390/technologies10030057)**)**  *The journal is published at the* ***Special Issue 10th Anniversary of Technologies—Recent Advances and Perspectives (MDPI)*** |
| **Overview:** Deep learning approach to detect suicide ideation from online tweets |
| * Used NLP techniques to clean the noisy text data to make the user's content seem more evident * Achieved 93.6% accuracy at predicting suicide ideation utilizing Bidirectional LSTM model |
| **Multi-class sentiment classification on Bengali social media comments using machine learning | (**[**DOI**](https://doi.org/10.1016/j.ijcce.2023.01.001)**)**  *The journal is published at the* ***International Journal of Cognitive Computing in Engineering (ScienceDirect)*** |
| **Overview:** Designed a novel Hybrid DL algorithm CLSTM to perform multi-class sentiment classification on Bengali Facebook comments |
| * Built a hybrid DL model (combination of LSTM and CNN) to analyze Facebook user’s sentiment leading to an 86% accuracy in classifying multi-class sentiment * Deployed the model with Flask on Heroku |
| **A Machine Learning Based Approach to Analyze Food Reviews from Bangla Text** **| (**[**DOI**](https://ieeexplore.ieee.org/document/10088971)**)**  *The conference paper is published at the* ***12th International Conference on Electrical and Computer Engineering (ICECE)*** |
| **Overview:** Proposed a multi-class food review analyzer that can classify Bengali food reviews into positive, negative ad neutral categories |
| * Created a Bengali food review dataset of 3963 comments on foods from different Facebook groups and pages and manually labeled each review * Achieved the highest accuracy score of 93% with the use of SGD classifier trained on TF-IDF |
| **Towards Multi-labeled Cyber Bullying Detection System Built on Deep Learning Algorithm**  *The Journal is currently under review in* ***Journal of Intelligent Information Systems (Springer)*** |
| **Overview:** A comparative performance analysis of DL classifiers to predict multi-class and multi-labeled cyber bullying contents from social media |
| * Built multi-labeled and multi-classed dataset from a variety of binary classified cyber bullying datasets * Achieved an F1 score of 0.82 and 0.87 for multi-class and multi-label classification respectively |
| **Hybrid Convolution Based Recurrent Neural Network System to Detect Multi-class Topic of Scientific Articles**  *The Journal is currently under review in* ***International Journal of Machine Learning and Cybernetics (Springer)*** |
| **Overview:** Built a CNN-RNN based hybrid DL network that can predict the keywords of scientific articles into distinct research topics |
| * Outperformed the results of prior research works by obtaining an accuracy and F1 score of 90.78% and 91.23%, respectively * Conducted a comparative analysis of the performance of the classifiers using confusion matrix and learning curve |
| **Data-driven Solution to Detect Sentiments of Drug Reviews Using Deep Learning Approaches**  *The Journal is currently under review in* ***The Journal of Supercomputing (Springer)*** |
| **Overview:** Provided a data-driven solution to detect patients' experiences with a particular medication |

**Interpersonal Skills**

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| * Confident, Hard Working and Determined * Ability to cope up with different situations | * Ability to rapidly build a relationship * Ability to work under stress and result oriented |

**Certifications**

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| * How Google Does Machine Learning | **Coursera** | [***Certificate***](https://www.coursera.org/account/accomplishments/certificate/HYG7TM6WY3PQ) |
| * The Python Programming A-Z Definitive Diploma in 2021 | **Udemy** | [***Certificate***](https://www.udemy.com/certificate/UC-802c9eca-5833-45f1-be36-0284f85461e7/) |
| * Machine Learning- From Basics to Advanced | **Udemy** |[***Certificate***](https://www.udemy.com/certificate/UC-53d8ed79-3dd4-4f4e-bd60-68e7f0683ae9/) |
| * Google Data Studio A-Z for Data Visualization and Dashboards | **Udemy** | [***Certificate***](https://www.udemy.com/certificate/UC-e6ad6cd4-4e6c-4926-a345-774d7ba46de9/) |
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**Extra-Curricular Activities**

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| * Participated in numerous online data science hackathons | **MachineHack** | **JantaHack** | **Hack4Retail** |
| * Worked as an Organizer at EWU CSE Programming Club. |
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**Personal Interests**

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| * Reading Books * Photography | * Travelling * Cooking |

**References**

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| **Dr. Shamim H Ripon**  Professor  Department of Computer Science and Engineering East West University  Email : dshr@ewubd.edu  Contact : +8801928891978 | **Md. Nawab Yousuf Ali**  Professor  Department of Computer Science and Engineering  East West University  Email: [nawab@ewubd.edu](mailto:nawab@ewubd.edu)  Contact : +8801917119022 |