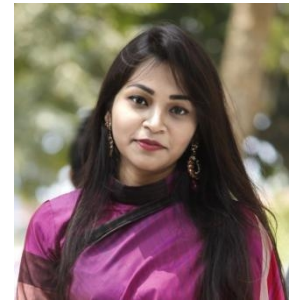


# AFRIDA RAHMAN

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**ResearchGate:** [www.researchgate.net/profile/Afrida\\_Rahman2](https://www.researchgate.net/profile/Afrida_Rahman2)  
**GitHub:** <https://github.com/AfridaRSam>  
**Portfolio:** <https://ruet-afrida-rahman-e93943.netlify.app/>  
**DockerHub:** <https://hub.docker.com/u/afridarahman>



## PERSONAL SUMMARY

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Being a graduate with a background in computer science, has a great interest in artificial intelligence and has worked as a research candidate for the Machine Learning Research Group. Recently joined MyMedicalHUB Bangladesh as Jr. AI Developer and now working on real time voice prediction in AI Learned Therapy project. Gathered 1.5 years research experience on Sequence analysis, Feature analysis, Model development and Computational proteomics. Experimentalized on different types of protein Post-Translational Modification (PTM) sites individually and simultaneously using several feature selection and extraction methods along with Sequence Analysis and Machine Learning Algorithms and also, deployed research works on user-friendly web-server. Completed some web development projects using HTML, CSS, JavaScript, SQL, Python, Docker, Django, Tensorflow.

## EDUCATION

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### **Bachelor of Science (BSc.) in Computer Science and Engineering (CSE), 2021**

**Institute :** Rajshahi University of Engineering and Technology

**CGPA :** 3.38

## WORK EXPERIENCE

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### **MyMedicalHUB – Jr. AI Developer (February 2021 – Present)**

- Analyzing musculoskeletal assessment solution which can be delivered in person or through our telemedicine interface with a virtual measurements and movements capture system.
- Working on real time audio detection for better prediction for voice command sub-project in AI Learned Therapy project. In this sub-project, audio data analysis with appropriate feature construction, deep learning model with deployment are the key elements.

### **iNeuron.ai – Trainee (June 2020 – Present)**

- Acquiring the basic knowledge of OOP concepts along with python core, exception handling, database programming, data analysis and visualization, rest API, SQL, statistics, exploratory data analysis, machine learning algorithms with end to end development.

**Banglamedic – Trainee (October 2020 – December 2020)**

- Learning the usage & implementation of Docker, Containerization, Kubernetes, Devops.

**Machine Learning Research Group– Research Candidate (August 2019 – Present)**

- Analyzing and exploring the relevant fields of Computational proteomics.

**IEEE – Student Member (December 2019 – Present)**

- Communicating with the professional world and building networks for future goals.

**Innovation Society of RUET (ISR) – General Member (2018 – 2020)**

- Collecting innovative ideas and maintaining relationship with creative people.

**Bangladesh Betar – Lead singer (2009 – 2014)**

- Maintaining a leading role in different cultural activities.

## PROJECTS & PUBLICATIONS

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### Projects:

➤ **Dockerized Crud API: (October 2020)**

- A simple Flask crud api by which data can be inserted, deleted, updated based on sending json response and stored data in MongoDB (same procedure is applied on PostgreSQL database) and then containerized the whole application for deployment procedure.

**Tools:** Docker, Flask, MongoDB, Postman, PostgreSQL

**Github:** <https://github.com/AfridaRSam/Docker-Implementation>  
<https://github.com/AfridaRSam/Docker-Containerization-Practise>

➤ **Web Scraping API: (September 2020)**

- **Review Scraper:** It is an application where customer reviews of a website (i.e. Flipcart) are scrapped using Flask and the gained customer reviews are stored automatically in MongoDB and lastly, the deployment has been completed using Heroku server.
- **Image Scraper:** It is another Flask application by which images can be scrapped from different website based on user requirement.

**Tools:** Flask, HTML, CSS, Python, MongoDB.

**Github:** <https://github.com/AfridaRSam/Data-Analysis-Implementation/tree/master/reviewScraper>  
<https://github.com/AfridaRSam/Data-Analysis-Implementation/tree/master/imageScraper>

➤ **Blogging Website:**

a) **Agriculture Disease Management System: (March 2018 – August 2018)**

**Tools:** HTML, CSS, Core PHP, MySQL

b) **Historical place based website: (March 2017 – December 2017)**

**Tools:** HTML, CSS, Core PHP, MySQL

**Github:** <https://github.com/AfridaRSam/Simple-web-projects>

➤ **Hospital management system: (March 2019 – June 2019)**

**Tools:** HTML, CSS, Core PHP, Laravel, MySQL, Mailtrap.io

**Github:** <https://github.com/AfridaRSam/Laravel-Project-3-2>

➤ **Research Projects :**

**Post Translational Modification: (January 2020 - Present)**

- The goal of this project is to identify post-translational modifications in proteins.

Several post-translational modifications (PTMs) are experimented.

- **Single predicted sites:** Formylation, Phosphoglycerylation, Nitrotyrosine sites. (Individually).
  - Prediction of predPhogly-Site : <https://github.com/Sabit-Ahmed/predPhogly-Site>
  - Single PTM predicted server: <http://103.99.176.239/predPhogly-Site>
- **Multiple predicted sites:** Acetylation, Gluterylation, Malonylation, Succinylation, Crotonylation, Glutarylation sites. (simultaneously)
  - Two web-servers are deployed to predict these multiple PTM sites:
    - a) <http://103.99.176.239/predML-Site>
    - b) <http://103.99.176.239/iMul-kSite>

**Tools:** Python, Matlab, Scikit-learn, Pandas, Numpy, Django, HTML, CSS.

**Researchgate:** <https://www.researchgate.net/project/Post-translational-Modifications>

## **Publications:**

### **International Conferences:**

- Prediction of Formylation Sites by Incorporating Sequence Coupling into General PseAAC.(Published) 2020  
**Authors:** Afrida Rahman, Sabit Ahmed, Julia Rahman and Md. Al Mehedi Hasan.  
**Conference Name:** IEEE Region 10 Symposium (TENSYP), 2020.  
**DOI:** <http://dx.doi.org/10.1109/TENSYP50017.2020.9230745>

### **International Journals:**

- predPhogly-Site: Predicting phosphoglycerylation sites with the incorporation of sequence-coupling information into Chou's general PseAAC.(Published) 2020  
**Authors:** Sabit Ahmed, Afrida Rahman, Md. Al Mehedi Hasan, Md Khaled Ben Islam , Julia Rahman and Shamim Ahmed.  
**Journal Name:** PLOS ONE (I.F : 2.740)  
**Web-server:** <http://103.99.176.239/predPhogly-Site>  
**DOI:** <https://doi.org/10.1371/journal.pone.0249396>
- predML-Site: Predicting Multiple Lysine PTM Sites with Optimal Feature Representation and Data Imbalance Minimization.(Under Revision) 2020  
**Authors:** Sabit Ahmed, Afrida Rahman, Md. Al Mehedi Hasan, Julia Rahman, Md Khaled Ben Islam and Shamim Ahmed.  
**Journal Name:** IEEE/ACM Transactions on Computational Biology and Bioinformatics. (I.F : 3.015)  
**Web-server:** <http://103.99.176.239/predML-Site>

- iMul-kSite: Computational Identification of Multiple Lysine PTM Sites by Analyzing the Instance Hardness and Feature Importance.(Submitted) 2021  
**Authors:** Sabit Ahmed,Afrida Rahman, Md. Al Mehedi Hasan and Shamim Ahmed.  
**Journal Name:** Briefings in Bioinformatics. (I.F : 8.99)  
**Web-server:** <http://103.99.176.239/iMul-kSite>
- Nitro-Tyr-Site: Predicting Nitrosylated Tyrosine Sites by Incorporating Probabilistic Sequence-coupling Information into PseAAC and Addressing Data Imbalance. (Submitted) 2021  
**Authors:** Afrida Rahman, Sabit Ahmed, Md. Al Mehedi Hasan.  
**Journal Name:** Current Bioinformatics.

## SKILLS

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### Data science and machine learning based:

- Data analysis, Protein sequence analysis, Feature analysis, Basic statistics, Classification techniques.
- Linear regression, Deep learning, Hyper parameter tuning, Transfer learning, Model development.

**Library based:** Tensorflow, Tensorflow.js, Scikit-Learn, OpenCV, Numpy, Pandas, Scipy.

**Visualization based:** Dataframe, Matplotlib, Seaborn, Plotly.

**Programming language based:** Python, C++, C, HTML, CSS, Matlab.

**Database based:** SQLite, NoSQL(MongoDB), PostgreSQL, MySQL.

**Framework based:** Django, Flask, Vue.js.

**Deployment based:** Docker, Docker-compose, Kubernetes.

**Others:** Microsoft Word, Excel, Powerpoint, git, linux command lines.

## CERTIFICATES

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IEEE Region 10 Symposium 2020 -

- Certificate of appreciation for a successful presentation on “Prediction of Formylation Sites by Incorporating Sequence Coupling into General PseAAC”

Coursera -

- Programming for Everybody (Getting Started with Python)
- Python Data Structures
- Using Databases with Python
- Using Python to Access Web Data

## REFERENCES

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