

Syed Ishtiak Rahman

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Experience

Trainee

B-JET (Bangladesh-Japan ICT Engineers' Training Program)

Sep 2023 - Ongoing

Baridhara, Dhaka

- Learning Japanese language, business manners, professional teamwork training
- Outcome: Japanese N4 level, Git and team project, Code contest

Under Graduate Teacher Assistant

CSE, UIU

Oct 2022 - May 2023

United International University

- Assist professors in managing lab class behavior using positive reinforcement
- Provide support with administrative tasks and students with academic concerns
- Collaborate on research and academic projects

Programmer and application developer

Fiverr

Freelance

- Created applications and websites as per client's opinion
- Developed features like POS inventory system, REST Api, Desktop GUI project
- Technology: Python, Tkinter, PHP, Java, JavaFx, MySql, Sqlite

Education

| Program | Institution/Board | %/CGPA | Year |
|--|--|-----------|-----------|
| B.SC in Computer Science & Engineering (Software Engineering, Data Science) Thesis: Machine Learning for Big Data Mining in Agriculture 4.0: Crop Price Prediction | United International University Dhaka, Bangladesh | 3.71/4.00 | 2019 - 23 |

Key Projects

1. AuctionBit

Feb 2022 - Mar 2022

, Technology: PHP, MySql, JavaScript, Bootstrap

Freelance

- Web based application where user can sell out unnecessary items from home by creating **auction** for products on the website. On the other side, customer can **bid on products** and can buy it. Seller can upload product information and create a **bid time** of it. After the time bidding time ends, the highest bidder will get the product.

2. Crop price prediction

Nov 2022-Feb 2023

(B.SC / Guide: Mr. Dewan Md. Farid, Professor)

United International University

- Machine Learning and Deep Learning based project for **forecasting crop prices** of Bangladesh based on **government datasets**. Analyze the fluctuation of crops from time series data with the help of Supervised Learning, Neural Networks, Bagging Ensemble, and Long-Short Term Memory.
- Contribution:** Compare and find accuracy rate and error levels of models
- Technology: **ML, DL, CNN**
- Tools:** Colab, Spider(env), MS Excel, Scikit-Learn, TensorFlow, Matplotlib

Course Projects

1. EaseTask

May-July 2023

, Technology: ReactJs, ExpressJs, MongoDB, Redux

Personal

- Web based application where user get authorized and **track and manage** their upcoming, ongoing and completed tasks. User can add, edit, remove their tasks. User has the ability to **profile managing**. For authentication and authorization, while logging, user generate **JWT** and set **Http-Only cookie**.

2. **Foot Ulcer Segmentation**

(B.SC / Faculty: Mr. Rayhan Ahmed, Assistant Professor)

March-May 2023

United International University

- **Image segmentation** project for superior diabetic foot ulcer diagnosis. Based on deep neural networks where **DeepLabV3** model is implemented, employing five distinct pre-trained models — ConvNeXtBase, EfficientNetV2M, InceptionV3, ResNet50, VGG16—as backbones, and assess models performance.
- **Contribution:** Compare and find accuracy rate and error levels of models
- **Technology:** DeepLabV3, Pre-trained model, DL, CNN ◦ **Tools:** Colab, Matplotlib

4. **SimpleSocial**

Oct-Dec 2023

, **Technology:** Django, MySql, Bootstrap

Personal

- Django based **blogging** application
- Authentication and Authorization
- Create different study groups and share educative posts
- Join different groups, read other posts

Technical Skills

- Programming Language: C, C++, Java, Python
- Database System: Mysql, MongoDB
- Framework: ReactJs, ExpressJs, Django REST, Flask
- Others: Git, Jira, Desktop GUI
- Web Technology: PHP, JavaScript, TypeScript
- OS: Linux, Windows
- AI/ML/DL: Tensorflow, Scikit-learn
- Tools:: Latex, Anaconda, Colab, Microsoft Office

Achievement

- Completed Easy(80+), Medium(80+), Hard(15+) problems in [Leetcode](#).

Publications

1. **Green IoT-Based Automated Door Hydroponics Farming System**

May 2023

ICICNIS 2023: IoT Based Control Networks and Intelligent Systems

Pune, India

- This paper proposes a fully automated **hydroponics** system along with the integration of **green IoT** which ensures an environment friendly, energy-saving, sustainable farming method.

2. **Precision Agriculture and Machine Learning Approach in Bangladesh**

April 2023

I2CT 2023: International Conference for Convergence of Technology

Pune, India

- The paper provides an in-depth review of the research on **ML applications in Bangladesh's** agricultural system focusing **disease detection, crop price and yield prediction**.

2. **Agriculture 4.0 in Bangladesh: Issues and Challenges.**

December 2022

SKIMA 2022

Combodia

- This paper aims to propose a **framework with Big Data & IoT** based architecture for Bangladesh agriculture based on the existing research advancements.

Course Work

- Software **Architecture**, Software **Testing** & Quality Assurance, Project Management
- Advanced Data Structures and Algorithms, **Machine Learning**, Digital **Image Processing**

Online Courses

- Code with Mosh: [React 18 for Beginners](#) (Sep - Nov, 2023)
- Udemy: [Machine Learning A-Z™: AI, Python R](#) (Dec 2022 - Feb, 2023)
- Abdul Bari: [Mastering Data Structures Algorithms using C and C++](#) (Dec 2021 - Apr 2022)

Positions of Responsibility

- **Leadership & Teamwork:** Led 5 diverse academic projects, final project/thesis, with 20 members from various courses in my academic period (2021-23).
- **Teaching** : From 2017-21, I taught various subjects including Science, Mathematics, English, Programming, and Databases to high school and university students both offline and online.

Others

- **Hobbies:** Chess, Reading books and blogs
- **Languages:** Bangla, English, Japanese
- **Professional Interests:** Software Architecture, Explore ML, Database system

Declaration

I do hereby declare that all the details furnished above are true to the best of my knowledge and belief.

Place: Dhaka, Bangladesh.

(Syed Ishtiaq Rahman)

Date: 12th Feb, 2024

Note: Highlighted are link to proofs and validation (if required).