Shagoto Rahman

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Computer Science and Engineering Discipline,

Khulna University.

Khulna-9208, Bangladesh.

18/2 Tootpara Eastlink Road

Khulna 9100, Bangladesh.

EDUCATION

| 2017 - 2022 | **Khulna University** | Khulna, Bangladesh. |

B.Sc. in Computer Science
and Engineering

CGPA: 3.72 out of 4.0   **Class Position: 4th**

Dissertation: "Smartphone-based Skin-cancer detection using Image Processing and Support Vector Machine."
Thesis Supervisor: Dr. Kamrul Hasan Talukder.

GRE Score: 315 (Quant: 164, Verbal: 151, AWA- 4.0).
TOEFL Score: 108 (R: 26, L: 28, S: 26, W: 28)

RESEARCH INTERESTS

- Machine Learning
- Deep Learning
- Computer Vision
- Natural Language Processing
- Data Science
- Artificial Intelligence

PUBLICATIONS

S. Rahman, M. Raihan, S. K. Mithila, "Smartphone-based Skin Cancer Detection using Image Processing and Convolutional Neural Network ", *12th INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT), Kharagpur, India, 2021.* Available: 10.1109/icccnt51525.2021.9579966

S. Rahman, S. Mithila, A. Akther and K. Alam, "An Empirical Study of Machine Learning-based Bangla News Classification Methods", *12th INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT), Kharagpur, India, 2021.* Available: 10.1109/icccnt51525.2021.9579655

S. Rahman, K.H. Talukder, S. K. Mithila, "An Empirical Study to Detect Cyberbullying with TF-IDF and Machine Learning Algorithms", *International Conference on Electronics, Communications and Information Technology (ICECIT), Khulna, Bangladesh, 2021.* Available: 10.1109/ICECIT54077.2021.9641251

S. Rahman et al., "Efficient Machine Learning Approaches to Detect Fake News of Covid-19", *Machine Intelligence and Data Science Applications*, pp. 513-525, 2022. Available: https://doi.org/10.1007/978-981-19-2347-0_40

M. Raihan, A. K. Bairagi, **S. Rahman,** "A Machine Learning Based Study to Predict Depression with Monitoring Actigraph Watch Data", *12th INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT), Kharagpur, India, 2021.* Available: 10.1109/ICCCNT51525.2021.9579614

K. Mumenin et al., "COVID-19 Fake News Detection on Social Media", *International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering (IC4ME2)*, 2021. Available: 10.1109/ic4me253898.2021.9768523

Submitted in Peer Reviewed Journals:

S. Rahman, M. Raihan, S. K. Mithila, "Smartphone-based Tomato Leaf Disease Detection using Image Processing Techniques and Convolutional Neural Network."

S. Rahman, K.H. Talukder, "Smartphone-based Skin-cancer detection using Image Processing and Support Vector Machine."

RESEARCH EXPERIENCES

03/2020 - 12/2021	**Undergraduate Research Student**
	Computer Science and Engineering, Khulna University.
	Research Advisor: Dr. Kamrul Hasan Talukder.
	Project: "Smartphone-based Skin-cancer detection using Image Processing and Support Vector Machine." (Undergraduate Thesis).
03/2021 - 08/2021	**DGTED Lab, Khulna University.**
	Research Advisor: Dr. Kazi Masudul Alam.
	Project: "An Empirical Study of Machine Learning-based Bangla News Classification Methods."
03/2021 - 08/2021	**Khulna University.**
	Research Advisor: Dr. Kamrul Hasan Talukder.
	Project: "An Empirical Study to Detect Cyberbullying with TF-IDF and Machine Learning Algorithms."
05/2021 - 11/2021	**North Western University, Khulna.**
	Project: "Efficient Machine Learning Approaches to Detect Fake News of Covid-19."

SEMINAR, CONFERENCE, AND WORKSHOPS

Attended several National and International Seminar, conference and workshops as:

- INTERNATIONAL CONFERENCE ON MACHINE INTELLIGENCE & DATA SCIENCE APPLICATIONS (MIDAS 2021) December 26-27, 2021

- First International Cyber Security Summit 2021. Venue: Khulna University. October 22, 2021.

- An International Conference on "*Big Data, IoT and Machine Learning (BIM 2021)*", Venue: Cox's Bazar, Bangladesh. September 23-25, 2021.

- An International Conference on "*2021 International Conference on Electronics, Communications and Information Technology (ICECIT).*", Venue: Khulna University, Bangladesh. September 14-16, 2021.

- An International Conference on "*12th INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT).*", Venue: IIT, Kharagpur, India (Remote). July 6-8, 2021.

- Online Workshop on Smart City and Smart Village, Venue: Khulna University, Bangladesh. February 27, 2021.

- 30 Coursera online courses on machine learning, deep learning, python, etc., 2020-2021.

- Training on Growing and Understanding your Business with Facebook, Venue: Khulna University. February 17, 2018.

- Ruby on Rails Workshop, Venue: Khulna University. August 12, 2017.

HONORS AND AWARDS

2021	Best Paper Award (INTERNATIONAL CONFERENCE ON MACHINE INTELLIGENCE & DATA SCIENCE APPLICATIONS (MIDAS 2021) December 26-27, 2021.)
2021	Bangladesh Hi-Tech Park (ICT Ministry) Startup Incubation Allotment for SkinCancer Detector.
2021	Bangladesh Hi-Tech Park (ICT Ministry) Startup Incubation Allotment for ChatBot for disabled people.
2017 – 2021	University Merit Scholarship: Class Position and Highest Academic Credentials (Undergraduate Program).
2017 – 2021	Board Scholarship on Higher Secondary Certificate Examination.
2014 – 2016	Board Scholarship on Secondary School Certificate Examination.
2012 – 2014	Board Scholarship on Junior School Certificate Examination.
2012	Prothom Alo Internet Genius Champion.
2009	Divisional Math Olympiad 1st Runner up.
2008	Divisional Math Olympiad 1st Runner up.

SKILLS AND TECHNIQUES

Programming: C, C++, C#, Assembly, Java, PHP/MySQL, Python, MATLAB, JavaScript, Android Studio, Visual Studio, Unreal Engine, Unity Engine, React.

Machine Learning
- Supervised Machine Learning.
- Unsupervised Machine Learning.

Deep Learning
- CNN
- RNN, LSTM, BiLSTM

Data Science
- Data Cleaning.
- Manipulation.
- Data mapping.

Natural Language Processing
- TF-IDF.
- Word2Vec.
- Textual Recognition.

Computer Vision
- Object Detection.
- Tensor Flow.
- OpenCV.

Web Programming
- PHP
- SQL Database
- React

Game Development
- Unity 3D.
- Unreal Engine.

PROJECTS

- Android-based skin cancer detector using Image Processing and Machine Learning.
- Android-based skin cancer detector using Image Processing and Convolutional Neural Network.
- Android-based Tomato Leaf Disease detector using Image Processing and Machine Learning.
- Cyberbullying Detector.
- Covid-19-based fake news detector.
- Bangla article classifier.
- Bangla sentiment analyzer.
- Bangla news Similarity and Searching tool for Disabled people.
- Bangla news summarizer for Disabled people.
- Bangla intelligent ChatBot.
- Bangle voice assistant.
- Military Simulator 3D using Unity Engine.
- 3rd Person Zombie Shooter 3D using Unreal Engine.
- Car Racing Game on Khulna Map.
- Computer Graphics (Object Rotation, Translation, Mirror and Scaling.)
- Face Recognition.
- Khulna University Hall and Housing Management.
- Railway management Web Program.
- Railway management Visual Studio version.
- Sugondha Diagnostic Official website.
- Drug Prediction using binary tree.
- Parser and Lexical Analyzer for compiling.
- Numerical Methods analyzer.
- Restaurant Billing System.
- Scientific Calculator.

TEACHING EXPERIENCE

2018 – 2021   Tutoring: Higher Secondary Math, Physics, Biology.

2017 – 2019   Prothom Alo math Olympiad camp.

INTERNSHIP EXPERIENCE

07/2020 - 12/2020   Software Engineering Mentorship Program Intern (Online)
Durbin Labs LTD, Dhaka, Bangladesh.

1/2021 - 6/2021   Research Intern (Online)
Next Solution Lab, Dhaka, Bangladesh.

REFERENCES

Dr. Kamrul Hasan Talukder
Professor
Computer Science and Engineering Discipline
Khulna University, Khulna-9208, Bangladesh.
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