

Rakib Hossain Rifat

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Professional Experience

💼 Software Engineer(Machine Learning)

Silicon Orchard Limited
19 May 2023 - Present

💼 Machine Learning Engineer

Polyfins Technology Inc
01 September 2021 - 06 September 2022

Education

🎓 Masters of Science (MSc.) in Computer Science and Engineering (Thesis Ongoing)

Brac University CGPA: **4.00** out of 4.00

🎓 Bachelor of Science (BSc.) in Computer Science and Engineering

Ahsanullah University of Science and Technology
2016-2021 CGPA: 3.386 out of 4.00

Achievements

🏆 Awarded **100% tuition fee waiver** for Postgraduate (M.Sc.) result.

Conference/Workshop

- 📄 Rifat, R. H., Shruti, A., Kamal, M., & Sadeque, F. (2023, July). **ACSMKRHR at SemEval-2023 Task 10: Explainable Online Sexism Detection (EDOS)**. In Proceedings of the 17th International Workshop on Semantic Evaluation (SemEval-2023) (pp. 724-732).link: ACSMKRHR at SemEval-2023 Task 10: Explainable Online Sexism Detection(EDOS)
- 📄 Rifat, R. H., Shruti, A. C., Kamal, M., & Alam, M. G. R. (2023, December). **Privacy-Preserving Knee Osteoarthritis Classification: A Federated Learning Approach with GradCAM Visualization**. In 2023 26th International Conference on Computer and Information Technology (ICCIT) (pp. 1-6). IEEE. doi:https://doi.org/10.1109/ICCIT60459.2023.10441001
- 📄 R. H. Rifat, S. Siddique, L. R. Das and M. A. Haque, **"Facial Shape-Based Eyeglass Recommendation Using Convolutional Neural Networks,"** 2023 IEEE Symposium Series on Computational Intelligence (SSCI), Mexico City, Mexico, 2023, pp. 867-872,doi:10.1109/SSCI52147.2023.10371836
- 📄 Kamal, M., Rifat, R. H., Shruti, A. C., & Alam, M. G. R. (2023, April). **Multi-criteria Decision Theoritic Approach for Tour Package Selection using Fuzzy AHP and TOPSIS Methods: A Case Study on Cox's Bazar**. In 2023 IEEE 8th International Conference for Convergence in Technology (I2CT) (pp. 1-7). IEEE.doi:10.1109/I2CT57861.2023.10126334
- 📄 A. C. Shruti, R. H. Rifat, M. Kamal and M. G. R. Alam, **"A Comparative Study on Bengali Speech Sentiment Analysis Based on Audio Data,"** 2023 IEEE International Conference on Big Data and Smart Computing (BigComp), Jeju, Korea, Republic of, 2023, pp. 219-226, doi:10.1109/BigComp57234.2023.00043 .
- 📄 S. Siddique, M. A. Haque, R. H. Rifat, R. George, K. Shujaee and K. D. Gupta, **"Cyber Security Issues in the Industrial Applications of Digital Twins,"** 2023 IEEE Symposium Series on Computational Intelligence (SSCI), Mexico City, Mexico, 2023, pp. 873-878, doi:10.1109/SSCI52147.2023.10371850.
- 📄 S. Siddique et al., **"Challenges and Opportunities of Computational Intelligence in Industrial Control System (ICS),"** 2023 IEEE Symposium Series on Computational Intelligence (SSCI), Mexico City, Mexico, 2023, pp. 1158-1163, doi:10.1109/SSCI52147.
- 📄 Md Manjurul Ahsan, Tasfiq E. Alam, Mohd Ariful Haque, Md Shahin Ali, Rakib Hossain Rifat, Abdullah Al Nomaan Nafi, Md Maruf Hossain, Md Khairul Islam, **Enhancing Monkeypox diagnosis and explanation through modified transfer learning, vision transformers, and federated learning**, Informatics in Medicine Unlocked, Volume 45, 2024, 101449, ISSN 2352-9148, doi:https://doi.org/10.1016/j.imu.2024.101449.
- 📄 **Federated Learning for Potato Leaf Disease Detection using CNN**
Marufa Kamal, Rakib Hossain Rifat, Abanti Chakraborty Shruti and Annajiat Alim Rasel. *The 2023 International Conference on Digital Image Computing: Techniques and Applications, Accepted.*

Comparison of Machine Learning Models for Early Prediction of Diabetes with LIME Interpretability

Abanti Chakraborty Shruti, Marufa Kamal, **Rakib Hossain Rifat**, Ehsanur Rahman Rhýthm, Md Humaion Kabir Mehedi and Annajiat Alim Rasel. *2023 IEEE 11th Region 10 Humanitarian Technology Conference (R10-HTC), Presented.*

CDD & CloudNet: A Benchmark Dataset & Model for Object Detection Performance, Ongoing

A Cross-Domain Exploration of Audio and Textual Data for Multi-Modal Emotion Detection, Ongoing

Undergraduate Projects

Tour Package Recommendation System in Cox's Bazar Using TOPSIS and Fuzzy AHP

In this Academic project , I have made my contributions in building a recommendation system using TOPSIS and Fuzzy AHP.

Language: Python Tools: Google Colab

A Comparative Study on Bengali Speech Sentiment Analysis Using Machine Learning and CNN Models

In this Academic project , I have made my contributions in creating A Comparative Study on Bengali Speech Sentiment Analysis Using Machine Learning and CNN Models

Language: Python Tools: Google Colab

Eczema Severity Score Prediction Using Deep Learning Techniques

In this project of Polyfins Technology Inc, I have made my contributions in predicting Eczema severity score from Images.

Language: Python Tools: Google Colab

Body Part Segmentation And Separation From Full Body Image

In this project of Polyfins Technology Inc, I have made my contributions in creating a pipeline that can segment and separate full body image into different part.

Language: Python Tools: Google Colab

Image Quality Assessment Using Deep Learning Techniques

In this project of Polyfins Technology Inc, I have made my contributions in Image Quality Assessment.

Language: Python Tools: Google Colab

"FixMatch: Simplifying Semi-Supervised Learning with Consistency and Confidence" Google Colab im-

plementation

This implementation is done for

Multiclass Classification, Multi Label Classification and Multi output Classification.

Language: Python Tools: Google Colab

SimCLR A Simple Framework for Contrastive Learning of Visual Representations

Google Colab implementation of SimCLR using pytorch

Language: Python Tools: Google Colab

Harassment Detection from Social Media Bangla Comments using Deep Learning

A system to identify harassment from the social media Bangla comments

Language: Python Tools: Google Colab

Gender Detection From Bangla Handwritten Images

Gender Detection From Bangla Handwritten Images using Logistic Regression and Deep Neural Network

Language: Python Tools: Google Colab

Bengali Handwritten Digits Classification

Bengali handwritten digits classification from image using Logistic Regression and Deep Neural Network

Language: Python Tools: Google Colab

Face Mask Detection

A binary classification model that can classify some one using mask or not.

Language: Python Tools: Google Colab

Pneumonia X-ray Detection

This model can detect if there is any abnormality in chest X-ray image.

Language: Python Tools: Google Colab

Technical Skills

⚙️ **Programming Languages:** Python, C, C++, Java

⚙️ **Machine Learning, Deep Learning**

⚙️ **Libraries:** Tensorflow, Keras, Pytorch, Poutyne

⚙️ **MLOps:** Tensorboard Wandb

⚙️ **Operating System:** Windows, Ubuntu

⚙️ **IDE:** VS code, PyCharm, MATLAB

⚙️ **Others:** GitHub, Microsoft Office

Extra Curricular Activities

- ✿ Reviewed research papers as a Peer Reviewer for IEEE Fourth International Conference on Communication, Circuits, and Systems in 2023
- ✿ Reviewed research papers as a Peer Reviewer for IEEE Symposium Series on Computational Intelligence (SSCI) in 2023
- ✿ Mentor: DeepLearning.AI TensorFlow Developer Professional Certificate Specialization at Deep Learning.AI On Coursera
- ✿ Mentor: TensorFlow: Data and Deployment Specialization at Deep Learning.AI On Coursera
- ✿ Former Vice President at AUST Blood Donation Club
- ✿ Former General Secretary at Ideal Science And Technology Aiming Research Council.

Certifications and Participations

- ✿ Problem-Solving (Basic) from HackerRank.
- ✿ Python (Basic) from HackerRank.
- ✿ SQL (Intermediate) from HackerRank.
- ✿ Deep learning specialization from Coursera.
- ✿ DeepLearning.AI TensorFlow Developer from DeepLearning.ai on Coursera.
- ✿ Cleaning Data in Python from Datacamp.
- ✿ Introduction to Importing Data in Python from Datacamp.
- ✿ Introduction to Data Science in Python from Datacamp.

Language Proficiency

- **English:** IELTS-7.5 (L:8.5,R:7.5,W:6.5,S:6.5)

Reference

Dr. Md. Golam Rabiul Alam

Professor

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BRAC University, Dhaka, Bangladesh

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Dr. Kishor Datta Gupta

Assistant Professor

Department of Cyber-Physical Systems

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Email: kgupta@cau.edu