S M Rafiuddin

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LinkedIn **GitHub** **Scholar** **Portfolio**

Objective

Aiming to build a career in Research and Development with a focus on Machine Learning and solving complex challenges that bridge theoretical foundations with practical applications.

Research Interest

Machine Learning, Deep Learning, Natural Language Processing, Pattern Recognition

Education

Doctor of Philosophy (Ph.D.) | ***Computer Science*** August 2022 – July 2027
Oklahoma State University

Bachelor of Science (B.Sc.) | ***Computer Science and Engineering*** January 2012 – October 2016
Rajshahi University of Engineering and Technology CGPA: 3.53/4.00

Technical Skills

Programming Languages: C, C++, Java, Python.
Operating System: Linux.
Version Control and Development: Git.
Web Technologies: HTML, CSS, JavaScript, PHP, Django.
Cloud Technologies: Amazon AWS, Docker.
Database Technologies: Oracle, MySQL, PL/SQL.
Technical Writing: LaTeX.
Editing and Design: Adobe Photoshop, Adobe Illustrator.
Library/Framework: NumPy, pandas, MatPlotLib, NLTK, ScikitLearn, Tensorflow, PyTorch, Seaborn.
Simulator: Matlab, Octave, Multisim, CISCO Packet Tracer, Unity, Blender.

Work Experience

Graduate Teaching Assistant August 2022 – Present
Oklahoma State University Stillwater, Oklahoma, USA

- ***Introduction to Computer Security (Fall 2022):*** Facilitated learning for 50+ students through interactive discussions, enhancing their understanding of key security principles and practices.
- ***Design and Implementation of Operating Systems I (Spring 2023, Spring 2024):*** Led weekly sessions and provided one-on-one mentoring to students, significantly improving their practical skills in OS development.
- ***Data Structures and Algorithm Analysis II (Fall 2023):*** Designed and graded complex assignments and exams to assess and reinforce students' problem-solving skills in advanced algorithms.

Lecturer October 2018 – July 2022
University of Asia Pacific Dhaka, Bangladesh

- Conducted Computer Science classes and labs, focusing on interactive and applied learning techniques, which enhanced students' understanding and retention of complex concepts.
- Led the ***RUET IUPC 2019*** Competitive Programming team, providing intensive coaching and problem-solving strategies that improved the team's performance and ranking in national competitions.
- Actively participated in ***IQAC workshops***, contributing to the development and implementation of ***Outcome Based Education (OBE)*** strategies that aligned with international academic standards and improved the curriculum's effectiveness.

PROJECTS

Deep Learning and GANs for Image Generation, Embedding, and Classification November 2021
PyTorch

- Utilized GANs and embedding techniques for realistic image generation and clustering, enhancing content diversity, classification accuracy, and scalable visualization with OpenSeadragon.

Text-based Question Answering System October 2016
Python, Scikit-Learn

- Developed an advanced text processing system with parsing, POS tagging, and semantic analysis, improving text categorization, tagging, and precise information extraction across research and customer service sectors.

PUBLICATIONS
(MOST RECENT FIRST)

- **Rafiuddin, S. M.** , Rakib, M., Kamal, S., & Bagavathi, A. (2024, February). Exploiting Adaptive Contextual Masking for Aspect-Based Sentiment Analysis. In *Pacific-Asia Conference on Knowledge Discovery and Data Mining* (pp. 147-159). Singapore: Springer Nature Singapore.
- **Rafiuddin, S. M. Rafiuddin, S. M.** (2022, March). High Cursive Complex Character Recognition using GAN External Classifier. *In Proceedings of the 2nd International Conference on Computing Advancements* (pp. 466-472).
- Karim, M. A., **Rafiuddin, S. M.**, Islam Razin, M. J., & Alam, T. (2022, March). Isolated Bangla Handwritten Character Classification using Transfer Learning. *In Proceedings of the 2nd International Conference on Computing Advancements* (pp. 11-17).
- Razin, J. I., Abdul Karim, M., Mridha, M. F., **Rafiuddin Rifat, S. M.**, & Alam, T. (2021). A Long Short-Term Memory (LSTM) Model for Business Sentiment Analysis Based on Recurrent Neural Network. *In Sustainable Communication Networks and Application* (pp. 1-15). Springer, Singapore.
- **Rafiuddin, S. M.** (2019, December). Estimation of Phylogenetic Tree using Gene Sequencing Data. *In 2019 4th International Conference on Electrical Information and Communication Technology (EICT)* (pp. 1-5). IEEE.
- **Rafiuddin, S. M.** (2017, December). Ranking of Bangla word graph using graph based ranking algorithms. *In 2017 3rd International Conference on Electrical Information and Communication Technology (EICT)* (pp. 1-5). IEEE.
- Mishu, S. Z., & **Rafiuddin, S. M.** (2016, December). Performance analysis of supervised machine learning algorithms for text classification. *In 2016 19th International Conference on Computer and Information Technology (ICCIT)* (pp. 409-413). IEEE.

VOLUNTARY SERVICES

- Volunteered at the ***National High School Programming Contest (NHSPC)***, Rajshahi, contributing to the organization and smooth execution of the event, fostering interest in programming among high school students.
- Volunteered at the ***Divisional Mathematical Olympiad*** in Faridpur, assisting in event coordination and promoting math education.
- Reviewed research papers for **IJCNN 2024** , providing critical feedback to advance the field of neural networks and computational intelligence.

AWARDS

- **Graduate and Professional Student Government Association** - Individual Student Funds Travel Award and Research Materials Grant of amount USD 600.

REFERENCE

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