

# S M RAFIUDDIN

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[LinkedIn](#) [GitHub](#) [Scholar](#) [Portfolio](#)

## OBJECTIVE

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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

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

## EDUCATION

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**Doctorate 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

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**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

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**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

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### Deep Learning and GANs for Image Generation, Embedding, and Classification

November 2021

PyTorch

- Leveraged Generative Adversarial Networks (GANs) to generate high-quality, realistic images and applied a spectrum of deep learning models for robust image classification, significantly enhancing content diversity and recognition accuracy.
- Advanced image analysis by implementing embedding techniques for clustering similar images, utilizing OpenSeadragon for scalable visualization, thus streamlining the retrieval and examination process.

### Text-based Question Answering System

October 2016

Python, Scikit-Learn

- Developed a comprehensive text processing system using Parsing, Parts of Speech Tagging, and Semantic Analysis, enabling advanced input text analysis for categorization, tagging, and information extraction.
- Enhanced electronic text manipulation and understanding across academic research and customer service sectors, featuring a unique sentence-matching capability for precise answer derivation.

## PUBLICATIONS

(MOST RECENT FIRST)

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- **Rafiuddin, S. M.**, Rakib, M., Kamal, S., & Bagavathi, A. (2024, February). [Exploiting Adaptive Contextual Masking for Aspect-Based Sentiment Analysis](#). *Accepted at PAKDD 2024*
- **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

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- 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*, Faridpur, assisting in the orchestration of the competition and supporting the promotion of mathematical education and problem-solving skills among participants.

## REFERENCE

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### [Dr. Arunkumar Bagavathi](#)

Assistant Professor

Department of Computer Science

Oklahoma State University

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