

## S M Rafiuddin

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**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.

**EDUCATION**      **Ph.D. in Computer Science**      August 2022 - Present  
[Department of Computer Science](#)  
[Oklahoma State University](#)

- Machine Learning
- Data Structures and Algorithms II
- Design and Implementation of Operating Systems II
- Cloud Computing and Distributed Systems
- Big Data Analytics
- Introduction to Computer Security
- Computer Organization and Architecture
- Numerical Computation

**Master of Science in Computer Science and Engineering**      Ongoing  
[Department of Computer Science and Engineering \(CSE\)](#)  
[Bangladesh University of Engineering and Technology \(BUET\), Dhaka.](#)

*Theory Courses Taken:*

- [Bioinformatics Algorithms](#)
- [Computational Biology](#)
- [Advanced Algorithms](#)
- [Meta-Heuristics](#)
- [Graph Theory](#)
- [Advanced Artificial Intelligence](#)

**Ongoing Thesis:** Semi-supervised Image Generation and Augmented Classification using Deep Convoluted Generative Adversarial Networks.

Under the supervision of [Dr. Muhammad Abdullah Adnan](#).

**B.Sc. in Computer Science and Engineering**      January 2012 - October 2016  
[Department of Computer Science and Engineering](#)  
[Rajshahi University of Engineering and Technology](#)  
CGPA: 3.53 out of 4.00

## RESEARCH INTEREST

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

## EXPERIENCE

**Graduate Teaching Assistant**  
Department of Computer Science  
*Oklahoma State University*

August 2022 - Present

- ***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**

Department of Computer Science and Engineering (CSE)  
*University of Asia Pacific - UAP*  
74/A Green Road, Farmgate, Dhaka 1215.  
(Host of the 45th International Collegiate Programming Contest World Finals, 2022)

October 2018 - July 2022

- Led theory and lab classes in the undergraduate Computer Science program, including question preparation, script evaluation, and result compilation.
- Supervised undergraduate projects and coached the Competitive Programming team at RUET IUPC 2019, enhancing practical and competitive skills.
- Actively participated in IQAC workshops and implemented Outcome Based Education (OBE) strategies, contributing to curriculum development and quality assurance.

### **Lecturer**

Department of Computer Science and Engineering (CSE)  
*Uttara University*

February 2017 - October 2018

- Conducted theory and sessional classes for undergraduate Computer Science, encompassing question preparation, script evaluation, and result compilation.

## STANDARDIZED TEST SCORES

- GRE General Test (Verbal Section - 152, Quant Section - 160, AWA - 3.5)
- TOEFL iBT Test (Reading - 23, Listening - 26, Speaking - 21, Writing - 26)
- *International Teaching Assistant (ITA) Exam* (280/300)

## TECHNOLOGY 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:** L<sup>A</sup>T<sub>E</sub>X.

**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.

**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.

**COURSES**  
**TAUGHT AS**  
**LECTURER**

**Theory Courses:**

- Machine Learning (Spring 2020 UAP, Fall 2020 UAP)
- Pattern Recognition (Fall 2018 UAP, Spring 2019 UAP, Fall 2019 UAP)
- Design and Analysis of Algorithms (Fall 2018 UU, Fall 2020 UAP)
- Operating System Design (Summer 2018 UU)
- Discrete Mathematics (Fall 2017 UU)
- Programming Language and Application II (C++) (Fall 2017 UU)
- Mathematics for Computer Science (Spring 2021 UAP)
- Visual and Web Programming (Fall 2021 UAP)

**Lab Courses:**

- Computer Graphics Lab (Fall 2018 UAP, Spring 2019 UAP, Fall 2019 UAP, Spring 2020 UAP, Fall 2020 UAP, Spring 2021 UAP, Fall 2021 UAP)
- Pattern Recognition Lab (Fall 2018 UAP, Spring 2019 UAP, Fall 2019 UAP, Spring 2021 UAP)

- Compiler Design Lab (Fall 2020 UAP)
- Algorithms Lab (Fall 2019 UAP)
- Object Oriented Programming - II (Java) Lab (Spring 2021 UAP)
- Visual and Web Programming Lab (Fall 2021 UAP)

## MOOC COURSE CERTIFICATES

## ACADEMIC COURSES

- [Machine Learning](#)  
Stanford University, USA, course provided by Coursera
- [Algorithms: Design and Analysis, Part 1](#)  
Stanford University, USA, course provided by Coursera
- [Understanding Research Methods](#)  
University of London, course provided by Coursera
- [Introduction to Mathematical Thinking](#)  
Stanford University, course provided by Coursera
- [Deep Learning Specialization](#)  
by *deeplearning.ai*
  1. [Neural Networks and Deep Learning](#)
  2. [Improving Deep Neural Networks: Hyperparameter tuning, Regularization, and Optimization](#)
  3. [Structuring Machine Learning Projects](#)
  4. [Convolutional Neural Networks](#)
  5. [Sequence Models](#)

## NON-ACADEMIC COURSES

- [Photography Basics and Beyond: From Smartphone to DSLR Specialization](#) by *Michigan State University, provided by Coursera*
  1. [Cameras, Exposure, and Photography](#)
  2. [Camera Control](#)
  3. [Principles of Photo Composition and Digital Image Post-Production](#)
  4. [Photography Techniques: Light, Content, and Sharing](#)
  5. [Photography Capstone Project](#)

## ONLINE PROFILES RESEARCH PROFILES

[\[LinkedIn\]](#) [\[Github\]](#) [\[Twitter\]](#)

[\[Google Scholar\]](#) [\[dblp\]](#) [\[Semantic Scholar\]](#) [\[ORCiD\]](#) [\[Scopus\]](#)

<b>VOLUNTARY SERVICES</b>	National High School Programming Contest (NHSPC), Rajshahi. <i>Volunteer</i>	2016
	Divisional Mathematical Olympiad, Faridpur. <i>Math Olympiad Volunteer (MOVer)</i>	2006
<b>TRAINING EXPERIENCE</b>	<b>The role and responsibility and ethical principle of the university teachers.</b> <i>Conducted by the Institutional Quality Assurance Cell (IQAC), Uttara University, Bangladesh</i>	February 24, 2018
	<b>Improving Learning and Teaching Skills (ILTS)</b> <i>Conducted by University of Asia Pacific</i>	May 5, 2019
<b>AWARDS</b>	Honorable Mention in ICT Fest, IUT, Gazipur Islamic University of Technology, Gazipur	2014
	Honorable Mention in National Collegiate Programming Contest (NCPC), DIU Daffodil International University (DIU)	2014
	Champion in ICT Olympiad, CSE Fest, RUET Career Club, Rajshahi University of Engineering and Technology (RUET)	2012
<b>REFERENCES</b>	<b>Dr. Muhammad Abdullah Adnan</b> Email: <i>adnan@cse.buet.ac.bd</i> Associate Professor Department of Computer Science and Engineering (CSE) Bangladesh University of Engineering and Technology (BUET)	
	<b>Dr. Arunkumar Bagavathi</b> Email: <i>abagava@okstate.edu</i> Assistant Professor Department of Computer Science Oklahoma State University	