






Rifat Rafiuddin

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 716 N Husband Street, Stillwater, OK, USA.

EDUCATION

- Oklahoma State University** Stillwater, OK, USA
Ph.D. in Computer Science Aug 2022 – Jul 2027 (Expected)
- Rajshahi University of Engineering and Technology (RUET)** Rajshahi, Bangladesh
B.Sc. in Computer Science and Engineering; CGPA: 3.53/4.00 Jan 2012 – Oct 2016

SKILLS SUMMARY

- Programming Languages:** C, C++, Java, Python
- Frameworks & Libraries:** NumPy, pandas, Matplotlib, Seaborn, NLTK, Scikit-learn, TensorFlow, PyTorch
- DevOps & Cloud:** Docker, Kubernetes, Amazon AWS, Git, Linux
- Big Data & DBMS:** Hadoop, Apache Spark, MySQL, Oracle, PL/SQL
- Tools & Scientific Platforms:** LaTeX, Adobe Illustrator, Adobe Photoshop, Matlab, Unity, Blender

EXPERIENCE

- Oklahoma State University** Stillwater, OK, USA
Graduate Teaching Assistant Aug 2022 – Present
 - Course Assistance:** Assisted in teaching 150+ students in Computer Security, OS Design, and Algorithm Analysis.
 - Mentorship:** Led labs, graded assignments, and mentored students in systems and algorithmic courses.
 - Content Design:** Designed assignments and exams to reinforce hands-on and conceptual understanding.
- University of Asia Pacific** Dhaka, Bangladesh
Lecturer Oct 2018 – Jul 2022
 - Course Instruction:** Delivered core CS courses and labs using interactive, applied teaching strategies.
 - Programming Team Coaching:** Coached RUET IUPC 2019 programming team to notable competitive success.
 - Curriculum Development:** Contributed to OBE-based curriculum enhancement through IQAC workshops.

PROJECTS

- Influenza Forecasting via ML and Numerical Methods (Numerical Modeling, Time Series Forecasting):** Compared RK4-based SVIR solvers with LSTM, CNN, and Random Forest for H1N1 prediction; RF achieved highest accuracy on real-world outbreak data. Tech: Python, Matplotlib, Scikit-learn (2024). [\[GitHub\]](#)
- Breast Cancer Detection with Deep Learning (Medical Imaging, CNNs):** Built deep learning classifiers (Inception, VGG16, MobileNet, Transformers) for IDC detection in histopathology images. Evaluated on Kaggle dataset. Tech: TensorFlow, Keras, NumPy (2022). [\[GitHub\]](#)
- Image Embedding and Classification (Visual Embeddings, Deep Learning):** Implemented Xception-based pipeline to extract and visualize image embeddings with classification and 2D/3D TensorBoard demos. Tech: TensorFlow, Matplotlib, Xception (2021). [\[GitHub\]](#)
- GAN-based Data Augmentation for Bangla Characters (GANs, Low-Resource NLP):** Applied adaptive discriminator augmentation to stabilize GAN training for Bangla script synthesis with visual demo support. Tech: PyTorch, GAN, OpenCV (2021). [\[GitHub\]](#)

SELECTED PUBLICATIONS

- Rafiuddin, S.M., Rakib, M., Kamal, S. and Bagavathi, A., 2024, April. **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. (Acceptance Rate: 18.47%)
- 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).
- Mishu, Sadia Zaman, and S. M. Rafiuddin (2016, December). **Performance analysis of supervised machine learning algorithms for text classification.** *Computer and Information Technology (ICCIT), 2016 19th International Conference on.* IEEE, 2016.

HONORS AND AWARDS

- GPSGA Travel & Research Award, Oklahoma State University (2024):** Awarded USD 600 for conference and research support. [\[Link\]](#)
- Honorable Mention, ICT Fest:** Islamic University of Technology (2014)
- Honorable Mention, NCPC:** Daffodil International University (2014)
- Champion, ICT Olympiad – CSE Fest:** RUET (2012)

VOLUNTARY SERVICES

- National High School Programming Contest (NHSPC), Rajshahi:** Volunteer 2016
- Divisional Mathematical Olympiad, Faridpur:** Math Olympiad Volunteer (MOVer) 2006
- Reviewed research papers for IJCNN 2024:** Peer Reviewer 2024