Mohammed Rakib

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🔗 LinkedIn ○ Github 🎓 Google Scholar

Education

Doctor of Philosophy in Computer Science   **August 2023 – Present**
Oklahoma State University - Stillwater, OK, USA   *GPA: 3.79*

Bachelor of Science in Computer Science and Engineering   **September 2017 – September 2021**
North South University - Dhaka, Bangladesh   *GPA: 3.96*

Research Interest

- Computer Vision
- Multimodal Learning
- NLP
- Model Compression Techniques

Technical Skills

Programming Languages: Python, Java, C, C++, Shell Scripting, Arduino, HTML, SQL, x86 Assembly
AI & Data Science: PyTorch, TensorFlow, Keras, OpenCV, Scikit-learn, Hugging Face, Pandas, Matplotlib
Web Development: Django, FastAPI, Flask, Nginx, HTML, CSS, JavaScript
Version Control: Git, Bitbucket
Databases: MySQL, MongoDB, NoSQL, Redis
DevOps & Containerization: Docker, Kubernetes
Cloud Computing: Amazon EC2, AWS Services
Big Data Technologies: Hadoop, Apache Spark

Professional Experience

Data Scientist & Machine Learning Engineer   **September 2022 – July 2023**
NeovoTech Ltd.   *Dhaka, Bangladesh*
- Create crawlers to scrape news articles from various websites and store them in an AWS S3 bucket.
- Create, maintain, and deploy text translation and text summarization pipelines.

Machine Learning Intern   **June 2022 – August 2022**
NeovoTech Ltd.   *Dhaka, Bangladesh*
- Collaborate with colleagues to prepare a web crawler that crawls Swedish news text.
- Contribute to improving the Neural Machine Translation (NMT) pipeline from Swedish to English text.

Academic Experience

Graduate Research Assistant   **August 2023 – Present**
Complex Systems Lab, Oklahoma State University   *Stillwater, OK, USA*
- Investigate modality imbalance in multimodal learning across real-world applications and benchmark datasets to ensure equitable representation of all modalities during model training.
- Refine knowledge distillation techniques to enhance cross-modal learning.
- Develop a multimodal framework integrating smartphone/edge-device captured crop/soil patch images with tabular meteorological data for improved soil moisture estimation and precision agriculture.

Graduate Teaching Assistant   **August 2023 – Present**
Computer Science Department, OSU   *Stillwater, OK, USA*
- Design & Implementation of Operating Systems 1 (Fall 2023)
- Intro to Object Oriented Programming (Spring 2024)

Research Assistant   **September 2021 – September 2022**
Apurba-NSU R&D Lab   *Dhaka, Bangladesh*
- Collaborate with fellow RAs to train, fine-tune, and deploy various deep learning models for image classification, OCR, ASR, sentence similarity, masked language modeling, QA, and NER.
- Conduct research in model compression techniques (pruning, quantization, and knowledge distillation), analyze findings, and present weekly reports.

Voluntary Activities

Conducted a **DataBytes Workshop** on Multimodal Learning at OSU

Instructed workshops on PyTorch and Deep Learning at NSU, promoting skill development in neural networks.

Assisted in fundraising for SCARS, a non-profit, to support the underprivileged, encouraging community support.