RUMMAN AHMED PRODHAN

Personal Website | Rumman Ahmed Prodhan | rumman-ahmed-prodhan | rummanprodhan
rumman153@gmail.com | (+880) 1521429847 | 85, Middle Paikapra, Mirpur-1, Dhaka-1216

WORK EXPERIENCE

Northern University Bangladesh *Sep 2022 - Present*
Lecturer, CSE (Full time):
Conducting BSc courses, including Database Management System, Artificial Intelligence and Expert System, Computer Architecture, and Software Development. Actively supervising undergraduate theses and projects focused on machine learning and deep learning.

Neuro-Analytics Lab, NJIT, USA *Jul 2022 - June 2023*
Volunteer Assistant Researcher (Remote): Submitted a journal to MDPI Sensors. Lab Website.

Marketing Doorway, Dhaka, Bangladesh *Jul 2017 - Sep 2022*
SEO Team Lead (Part-time, Remote): Managed a team of SEO associates.

Bondstein Technologies Limited, Dhaka, Bangladesh *Jan 2022 - Jun 2022*
Intern at Research & Development: Developed a real-time conveyor belt fault detection system for British American Tobacco (BAT).

Lead Technology, Dhaka, Bangladesh *Jul 2016 - Jul 2017*
SEO Specialist (Part-time, Remote)

EDUCATION

University of Asia Pacific, Dhaka, Bangladesh *Apr 2018 - Jun 2022*
BSc. in Computer Science & Engineering
Cumulative CGPA: 3.79/4.00, CGPA of last 2 years: 3.96, CGPA of last semester: 4.00

PUBLICATIONS

Published Journal (03 Nov 2022): Sumya Akter†, **Rumman Ahmed Prodhan†**, Tanmoy Sarkar Pias, David Eisenberg, Jorge Fresneda Fernandez. *"M1M2: Deep Learning-Based Real-Time Emotion Recognition from Neural Activity."* MDPI Sensors. doi:10.3390/s22218467. †These authors contributed equally.

Published Paper (11 Jun 2023): Rumman Ahmed Prodhan, Sumya Akter, Muhammad Bin Mujib, Md. Akhtaruzzaman Adnan, Tanmoy Sarkar Pias. *"Emotion Recognition from Brain Wave using Multitask Machine Learning Leveraging Residual Connections."* MIET 2022, Noakhali, Bangladesh. doi:10.1007/978-3-031-34622-4_10.

Published Paper (01 Jan 2023): Sumya Akter, **Rumman Ahmed Prodhan**, Muhammad Bin Mujib, Md. Akhtaruzzaman Adnan, Tanmoy Sarkar Pias. *"Evaluating the Effectiveness of Classification Algorithms for EEG Sentiment Analysis."* ICSADL 2022, Lalitpur, Nepal. doi:10.1007/978-981-19-5443-6_17.

Published Paper (2024): Rumman Ahmed Prodhan, Sumya Akter, Tanmoy Sarkar Pias, Md. Akhtaruzzaman Adnan. *"Optimal EEG Electrode Set for Emotion Recognition From Brain Signals: An Empirical Quest."* ABC 2022, London, UK. arXiv:2311.17204.

Accepted Paper (28 Nov 2024): Supervised by **Rumman Ahmed Prodhan**. *"Enhanced Pediatric Dental Segmentation Using a Custom SegUNet with VGG19 Backbone on Panoramic Radiographs"*, 27th ICCIT 2024, Bangladesh.

Undergraduate Thesis (01 Jun 2022): *"Emotion Recognition from Facial Expression and Brain Signals,"* Supervised by Md. Akhtaruzzaman Adnan, Co-Supervised by Tanmoy Sarkar Pias, University of Asia Pacific.

LANGUAGE PROFICIENCY

IELTS Academic (27 April 2024): Overall band score - 8; Listening - 8.5, Reading - 8.0, Writing - 7.0, Speaking - 7.5

ONGOING RESEARCH

- Pediatric teeth segmentation from dental radiographs (Transfer learning)
- Emotion recognition from EEG signals (Subject-independent)
- Review on emotion recognition from brain signals
- Bibliometric analysis on emotion recognition
- Real-time emotion and face recognition using CNN
- Fault detection model for conveyor belts (Lightweight)

PROJECTS

- Real-time emotion recognition and attendance system for classes (Raspberry Pi)
- Live face recognition from webcam using CNN: Github
- Conveyor belt fault detection system for BAT (Raspberry Pi)
- Bangladeshi travel blog using Django: Live & Demo
- Air Tickets Management (SQL): Github
- Employee Management (Java): Github
- 2D endless runner game using Unity: Github

AWARDS AND ACHIEVEMENTS

VC's Honor List: Awarded by the University of Asia Pacific for outstanding academic performance in 4th year (2nd and 1st semesters), 3rd year (2nd and 1st semesters).

Dean's Honor List: Awarded by the University of Asia Pacific for outstanding academic performance in 2nd year (2nd and 1st semesters).

RESEARCH SKILLS

Machine Learning, Deep Learning, Signal Processing, Computer Vision, Image Processing

TECHNICAL SKILLS

Programming: Python, Java, C, C++, HTML, CSS, Assembly
ML Tools: Keras, Tensorflow, Matlab, OpenCV, Pytorch
Networking: Cisco Packet Tracer
Robotics: Arduino, Raspberry Pi, Jetson Nano
Databases: SQL, MySQL
Frameworks: Django, Bootstrap
App Development: Unity
Operating Systems: Linux
Software Tools: Latex, VOSviewer, Bibexcel, Microwind, Codeblocks, Pycharm, Prolog

REFERENCES

Tanmoy Sarkar Pias
Doctoral Candidate, Computer Science
Virginia Tech, Blacksburg, VA, USA
tanmoysarkar@vt.edu

Dr. David Eisenberg
Assistant Professor, School of Business
Montclair State University, NJ, USA
eisenbergd@montclair.edu