MD ARIFUL ISLAM

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PROFILE

Final-year MSc student at Chongqing University with a strong foundation in computer science and practical experience in software development. Research interests include Data Science, Deep Learning, vehicle trajectory representation, trajectory prediction and analysis, streaming data processing, Artificial Intelligence, and Machine Learning. Experienced in developing data-driven applications and applying machine learning techniques to research challenges, with research contributions in vehicle trajectory representation learning and pedestrian trajectory prediction.

EDUCATION

MSc in Computer Technology
Chongqing University, Chongqing, China — Sep 2024 – Jul 2027(Expected)
Credit-weighted average: **86.6/100**

BSc in Computer Science and Technology
Southwest Petroleum University, China — Oct 2017 – Jul 2021
GPA: **3.37/5.00**

RESEARCH INTERESTS

- Trajectory Prediction and Analysis
- Streaming Data Processing
- Deep Learning
- Artificial Intelligence and Machine Learning
- Vehicle Trajectory Representation Learning
- Data Science

RESEARCH PUBLICATIONS

1. TSCA-Net: Temporal-Spatial Clique Attention for Multimodal Pedestrian Trajectory Prediction

International Conference on Mobility, Sensing and Networking (MSN 2026) – **CCF C**
Authors: Md Mustafizur Rahman, Guangchao Yang, A F M Abdun Noor, Md Imam Ahasan, **Md Ariful Islam**.
Status: Accepted || Paper Link

- Introduces temporal-spatial clique attention to model the relationship between pedestrian movement history and potential destinations.
- Models dynamic social interactions between pedestrians and adapts prediction complexity using KAN-based grid refinement.

2. DeltaPath: Gated Delta-Rule Encoding for Efficient Vehicle Trajectory Representation Learning

IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2027) – **CCF B**
Authors: **Md Ariful Islam**, Ruiyuan Li, A F M Abdun Noor, Md Imam Ahasan, Md Rakibul Islam
Status: Under Review

- Proposes a gated delta-rule approach for efficient vehicle trajectory representation learning.
- Introduces movement-conditioned memory updates and trajectory point selection to improve representation quality and computational efficiency.

3. Transfer Learning-Based COVID-19 Detection Using Chest X-Ray Images with a Pretrained Neural Network and Custom Classifier

2025 International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN)
Authors: MD Roman Sarkar, MD Rased Hasan, MD Shohel Rana, **MD Ariful Islam**

Status: Accepted || **Paper Link**

- Explores transfer learning with pretrained neural networks and a custom classifier for COVID-19 detection using chest X-ray images.

TECHNICAL SKILLS

Programming Languages: Python · Java · JavaScript · TypeScript
Scientific Computing & Data Analysis: NumPy · Pandas
Machine Learning & Deep Learning: PyTorch · Deep Learning · Sequence Modelling
Web Development: React · Node.js · Express.js · MongoDB · Redux · Tailwind CSS, Next.js
Research & Development Tools: Git · GitHub · Jupyter Notebook · LaTeX

PROFESSIONAL EXPERIENCE

Junior Software Engineer (Web Developer)
RedBolt IT, Jashore, Bangladesh Jan 2022 – Sep 2023

- Collaborated with designers to develop clean, user-friendly interfaces and interactive web experiences.
- Developed project concepts and maintained efficient development workflows.
- Worked with senior developers on complex web development projects for corporate clients.

LANGUAGES

English: IELTS Academic — Overall 7.0 (Listening: 7.5 · Reading: 7.0 · Speaking: 6.5 · Writing: 6.0)
Bengali: Native

REFERENCES

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