

MD RUMAN ISLAM

Software Engineer • Netowrking, Real-Time Systems and AI/ML Applications

✉ mail2ruman.i@gmail.com
📧 ruman23

☎ +1-531-210-5005

🌐 rumanislam.me

📍 Omaha, NE, USA

🌐 mdrumanislam

EXPERIENCE

Graduate Research Assistant

University of Nebraska Omaha

📅 Aug 2022 – Present

📍 Omaha, NE

- Designed and implemented software for real-time communication and congestion control to improve streaming performance and reduce latency.
- Developed and tested autonomous driving modules on a Chrysler Pacifica Plug-in Hybrid using ROS and Autoware, integrating sensor data for navigation and control.

Software Engineer

Samsung R&D Institute Bangladesh

📅 Dec 2018 – Jul 2022

📍 Dhaka, Bangladesh

- Developed the SmartThings iOS onboarding system for OCF devices and Hubs, enabling IoT devices, including Zigbee and Z-Wave, to connect with Samsung Cloud.
- Integrated RESTful APIs for device-cloud communication and implemented secure authentication.
- Improved performance by optimizing QR code scanning and reducing app size through cloud offloading.

SELECTED PROJECTS

Chrysler Pacifica Autonomous Driving

Autonomous Vehicles Lab

📅 2024 – 2025

- Built autonomous driving software for a Chrysler Pacifica Plug-in Hybrid using ROS and Autoware.AI, integrating LiDAR, cameras, and GPS with HD maps for navigation.

Real-Time Object Detection (YOLOv7, TensorRT, ROS)

Drone Monitoring

📅 2024 – 2025

- Deployed a GPU-accelerated, multi-threaded object detection pipeline on Jetson Orin Nano, enabling real-time drone monitoring of infrastructure.

Healthcare Analytics Dashboard

Kohll's Rx

📅 2025

- Developed a Windows-based R Shiny app with interactive dashboards and automated reporting to support healthcare business decisions.

SKILLS

Languages & Frameworks: Python, C++,

Swift, ReactJS

Tools: Git, Conda, Jira (Agile/Scrum)

Databases: MongoDB, Firebase, MySQL

Platforms: Linux, Raspberry Pi, Jetson Orin Nano, Embedded Systems

Interested Areas: Networking, Real-Time Systems, Applications of AI & ML

AWARDS



Icon of the Month (Mar–Apr 2020)

Samsung R&D Institute Bangladesh

EDUCATION

🎓 Ph.D. in Computing & Information Science

University of Nebraska Omaha

📅 Aug 2022 – Present

🎓 M.Sc. in Computer Science

University of Nebraska Omaha

📅 Aug 2022 – Dec 2024

🎓 B.Sc. in Computer Science and Engineering

Shahjalal University of Science & Technology

📅 Apr 2014 – Dec 2018

KEY PUBLICATIONS

- Characterizing Encrypted Application Traffic Through Cellular Radio Interface Protocol, *IEEE MASS 2024*, Seoul, Korea. <https://doi.org/10.1109/MASS62177.2024.00050>
- Overcoming Autoware-Ubuntu Incompatibility in Autonomous Driving Systems-Equipped Vehicles: Lessons Learned, *arXiv Preprint*, 2024. <https://arxiv.org/abs/2410.06492>
- Deep Reinforcement Learning for Congestion Control in Real-Time Communication Systems, under review at *IEEE INFOCOM 2026*