# MD MAHIR ASHHAB

PhD Researcher – Computer Systems & Networking
Low-latency transport (L4S), congestion control, streaming systems
Seeking Software Engineer / Research Internship (Summer 2026)

## CONTACT


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## RESEARCH INTERESTS

**Low Latency, Low Loss, Scalable Throughput (L4S)**

L4s Enabled Media communication

**Edge/Cloud Computing**

Cost minimization, Optimal Deployment, Maximization of QoS and QoE

## CITATIONS

**Number of Publications: 5**

**Total Citations: 24**
h-index : 03

## SKILLS

**Python (experimentation, data analysis)** 7+ yrs

**C/C++ (systems, networking)** 4+ yrs

**Networking & Systems**

TCP/IP, congestion control, low-latency transport (L4S), Linux, distributed systems, performance measurement

## EDUCATION

**PhD 2nd Year - Computer Science** — **AUG 2024 - Present**
**University of Virginia - USA**

**MS - Computer Science & Engineering** — **JAN 2018 - MAR 2021**
**University of Dhaka (CSEDU) - Dhaka, Bangladesh**

Passed with **CGPA 3.52 out of 4.00**.

**B.Sc. - Computer Science & Engineering** — **JAN 2014 - DEC 2017**
**University of Dhaka (CSEDU) - Dhaka, Bangladesh**

Passed with **CGPA 3.60 out of 4.00**.

## WORK EXPERIENCE

**Lecturer (On Study Leave)** — **JUN 2022 - July 2024**
**East West University, Dhaka Bangladesh**

Frequently taken Courses: Computer Networks, Operating Systems, Data Communications, Statistics for Data Science etc.

**Lecturer** — **MAY 2018 - MAY 2022**
**Eastern University, Ashulia, Bangladesh**

Frequently taken courses: Operating Systems, Computer Networks, Algorithms and Data Structures, Distributed systems etc.

## RESEARCH EXPERIENCE

**B.Sc Thesis** — **DEC 2017**
**Field: Cloud Computing**

Designed a delay-aware task assignment algorithm for mobile edge and cloud systems, optimizing latency-sensitive workloads across heterogeneous environments.

**M.S Thesis** — **JAN 2019-DEC 2020**
**Field: Computer Networks and Deep Reinforcement Learning**

Applied deep reinforcement learning to optimize resource allocation in network function virtualization, balancing latency, throughput, and infrastructure utilization.

**Research in Computer Systems & Networking** — **JUN 2021–Present**

Conducted research in computer systems and networking, focusing on performance evaluation, resource optimization, and latency-sensitive applications in real-world environments.

## SELECTED PUBLICATIONS & PRESENTATIONS

**Poster Presentation: ECN-based Congestion Control for WebRTC** — **October 2025**
**ACM Internet Measurement Conference (IMC) 2025**

Presented research on ECN-based congestion control for WebRTC, highlighting low-latency performance in real-time media delivery.

**An extensive photographic dataset to classify laptop components for automating e-waste management by recycling old laptops** — **Elsevier**
**Status: Accepted and Published**

Data in Brief: Volume 57

**A Comparative Analysis of Deep Learning Approaches in Bangla Document Categorization** — **ICCIT 2023**
**Status: Accepted and Published**

2023 $26^{th}$ International Conference on Computer and Information Technology (ICCIT) (ISBN: 979-8-3503-5901-5), 2023

**Detecting Pneumonia from X-Ray Images of Chest using Deep Convolutional Neural Network** — **IBDAP 2023**
**Status: Accepted and Published**

$4^{th}$ International Conference on Big Data Analytics and Practices (IBDAP) (ISBN: 979-8-3503-0019-2), 2023

**An Empirical Study to Analyze the Impact of Instagram on Students' Academic Results** — **TENSYMP 2020**
**Status: Accepted and Published**

IEEE Region 10 Symposium (TENSYMP) (ISSN: 2642-6102) , 2020

**Execution Delay-aware Task Assignment in Mobile Edge Cloud and Internet Cloud** — **STI 2019**
**Status: Accepted and Published**

International Conference on Sustainable Technologies for Industry 4.0 (STI) (ISBN: 978-1-7281-6099-3) , 2019

## RECENT PROJECTS

**PhD Research – Low-Latency Transport & Real-Time Communication** — **2024–Present**
**Tool: FABRIC Testbed**

Evaluating L4S congestion control in a multi-site testbed and analyzing end-to-end performance of WebRTC-based real-time communication under varying network conditions.

**Lookahead Caching for Latency-Sensitive Inference** — **2024**
**Tool: SgLang, Python**

Designed and evaluated a lookahead caching policy for KV cache management, improving latency behavior and cache efficiency for large-scale LLM inference workloads.

**Laptop Components Classification** — **2023**
**Tool: Python, CNN models, Pytorch**

Developed a large-scale labeled dataset and trained CNN-based models to support automated component classification for scalable e-waste management systems.

**Optimization of Virtualized Network Function Chaining & Resource Allocation** — **2023**
**Tool: Python, Java, CloudSim**

Developed and evaluated policies for resource allocation and virtualized network function chaining to optimize latency-sensitive applications on edge and cloud infrastructure.