

Tushin Mallick

Education

Sept 2023 - Ph.D. in Computer Science, Northeastern University, Boston, MA

Present GPA 4.00/4.00

Advisor: Dr. Cristina Nita-Rotaru

Feb 2017 - May B.Sc. in Computer Science & Engineering, Bangladesh University of Engineering

2022 & Technology, Dhaka, Bangladesh

GPA 3.70/4.00

Research Interests

Network Security, Distributed Systems, Post-Quantum Cryptography

Experience

May 2025 – Research Intern, $\it Cisco, San José, CA$

 $August\ 2025$

May 2024 – April Graduate Research Assistant, NDS2 Lab, Northeastern University (Cybersecurity 2025 & Privacy Institute), Boston, MA

June 2022 – June **Research Assistant**, Bangladesh University of Engineering & Technology, Dhaka, 2023 Bangladesh

- O Malware App Identification using System Call Pattern
 - Detection of malware applications by training deep learning models on sequential system call attributes.
 - Generated a random forest model that successfully classifies malware and benign applications.
- Cloud-Fog Federation
 - Researched federation between cloud and fog networks addressing authentication and application handover problems.

Teaching

Graduate Teaching Assistant, Northeastern University, Boston, MA

- ${\color{red} \circ}$ CS 3650: Computer Systems (Fall 2025)
- O CS 6240: Large-Scale Parallel Data Processing (Spring 2024)
- CS 3700: Networks & Distributed Systems (Fall 2023)

Service

Web Chair, ACM QRSEC 2025, Taipei, Taiwan

Publications

E. Li, **T. Mallick**, E. Rose, W. Robertson, A. Oprea, C. Nita-Rotaru — "ACE: A Security Architecture for LLM-Integrated App Systems," NDSS 2026.

T. Mallick, C. Nita-Rotaru, A. Kundu, R. Kompella — "Fingerprinting Implementations of Cryptographic Primitives that Use Post-Quantum Algorithms," *Preprint*.

A. Ali, **T. Mallick**, S. Sakib — "Provisioning Fog Services to 3GPP Subscribers," *IEEE ICC 2022*.

A. Ali, **T. Mallick**, M. Islam, M. S. Islam, S. Sakib — "3GPP Edge-Fog Federation: Transparent Third-Party Authentication & Application Mobility," *Computer Communication* 2022.

Honours

2021–2022 Dean's List (2 semesters), Bangladesh University of Engineering & Technology

Coursework

Formal Specification & Verification \cdot Seminar in Computer Systems \cdot Machine Learning \cdot Foundations of Distributed Systems \cdot Information Visualization Theory

Skills

Languages Python, Java, C/C++, PHP, JavaScript, SQL, HTML/CSS

Frameworks TensorFlow, Pandas, NumPy, Scikit-learn

Formal Methods NuXmv, TLA⁺, Isabelle, Spin

Tools Linux, Git, Bash/Zsh, LATEX, Microsoft Office