Tushin Mallick

+1 (617) 251 1710
mallick.tu@northeastern.edu
tushin.net
T-449
tushin-mallick-0233311a0

Education

Sept 2023 – Present
Ph.D. in Computer Science, *Northeastern University*, Boston, MA
GPA 4.00/4.00
Advisor: *Dr. Cristina Nita-Rotaru*

Feb 2017 – May 2022
B.Sc. in Computer Science & Engineering, *Bangladesh University of Engineering & Technology*, Dhaka, Bangladesh
GPA 3.70/4.00

Research Interests

Network Security, Distributed Systems, Post-Quantum Cryptography

Experience

May 2025 – August 2025
Research Intern, *Cisco*, San José, CA

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

June 2022 – June 2023
Research Assistant, *Bangladesh University of Engineering & Technology*, Dhaka, Bangladesh
- **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
- CS 3650: *Computer Systems* (Fall 2025)
- 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 · Seminar in Computer Systems · Machine Learning · Foundations of Distributed Systems · 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