

Nirob Arefin

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RESEARCH INTEREST

- Computer Security and Privacy
- Computer Networks
- Software Systems

EDUCATION

B.Sc. in Computer Science and Engineering

Bangladesh University of Engineering and Technology (BUET)
CGPA: 3.43 on a scale of 4.00

Feb 2016 – Feb 2021
Dhaka, Bangladesh

PUBLICATIONS

On age prediction from facial images in presence of facial expressions 
Md. Shahedul Haque Shawon, Sagor Biswas, **Nirob Arefin**, Tanmoy Sarkar Pias, Ashikur Rahman
International Journal of Applied Pattern Recognition, 6(4), pp.345-369.

Nov 2021

DoT: Degradation of Throughput by the Adversarial Behavior of Nodes in Terahertz Communication Networks 
Nirob Arefin, A. B. M. Alim Al Islam
12th International Conference on Next-generation computing, communication, Systems and Security (12th NSysS 2025)

Nov 2025

RESEARCH

DoT: Degradation of Throughput by the Adversarial Behavior of Nodes in Terahertz Communication Networks

- Discovered a novel attack scenario for a newly proposed MAC protocol in THz communications.
- Simulated in ns-3 and showed that adversary nodes could significantly reduce the network throughput.

MGMD-GAN: Generalization Improvement of Generative Adversarial Networks with Multiple Generator Multiple Discriminator Framework Against Membership Inference Attacks

- Proposed a new GAN framework with multiple generators and multiple discriminators.
- Showed with experimental analysis that the generalization gap is reduced for the proposed model, making it less vulnerable to Membership Inference Attacks.

Investigating Denial of Service Vulnerabilities in WPA3 Based Wireless Networks

- Analyzed the prevention mechanism for Denial of Service attack in case of deauthentication or disassociation frame, mentioned in the paper "On the Robustness of Wi-Fi Deauthentication Countermeasures"
- Conducted experiment using Linux hostapd along with a wifi-adapter.

PROFICIENCY TEST SCORES

Graduate Record Examination (GRE)

Score: 317

Verbal: 153, Quantitative: 164, AWA: 3.5

TOEFL

Score: 111

Reading: 29, Listening: 28, Speaking: 27, Writing: 27

PROFESSIONAL EXPERIENCE

Incepta Solutions

Remote

Ontario, Canada

Practice Manager | Data, Automation, and AI

Jul 2024 – Present

- Leading the engineering team for AgentSense, a brand under Incepta, focused on developing custom GenAI solutions for enterprises.
- Leading cross-functional teams to deliver innovative data and integration solutions.

- Designing solution architectures and managing end-to-end project execution using Agile methodologies.

Senior Software Developer

- Developed an *Invoice Management Application* that automatically extracts information from uploaded invoices, stores it in a database, and synchronizes with *Salesforce*. Technologies include *Java Servlet, JSP, Tomcat, and MySQL*.
- Developed *Employee Onboarding-Offboarding Automation* for a Canadian Municipality that includes various on-premise and cloud applications.
- Worked on upgrading and enhancing a legacy budget application for a global beverage company.

Jan 2023 – Jun 2024

Software Developer

- Developed over 50 integrations in *Workato* with different applications for a leading information security and data privacy provider.
- Analyzed security aspects of APIs of an application with a leading API security platform - *Noname Security*.
- Built a *MuleSoft* application that synchronizes changes in *Salesforce* with an external database.

Jan 2022 – Dec 2022

Synesis IT Ltd.

Onsite

Programmer

- Worked with the NEIR team that developed an application for the Bangladesh Govt. to check the use of illegal and stolen handsets. Key responsibilities included developing the web portal using the *Angular* framework and developing APIs using the *Spring Boot* framework.

National Equipment Identity Register ↗

Feb 2021 – Dec 2021

Dhaka, Bangladesh

SELECTED PROJECTS

Travelers_Guide ↗

Django, JavaScript, CSS, HTML

A website to guide travelers to find out the nearest tourist spots, restaurants, and transportation in Dhaka City. Notable features include route navigation, reviews, recommending new spots, etc.

Art Gallery Management System ↗

Oracle, Java, JavaFX

A Database management system for an Art Gallery.

ICMP Blind Connection Reset Attack ↗

C, Shell

Prevents a user from accessing the internet by continuously sending ICMP error messages.

Known Password Attack ↗

Python

A security breach system to sign in to others' accounts.

Catch That Egg ↗

C, C++, i-Graphics

Egg Catching game with multiple levels.

TECHNICAL SKILLS

- **Programming Languages:** C, C++, Python, Java, SQL, TypeScript, Ruby, Dataweave, HTML, RAML, Bash
- **Frameworks:** Angular, Spring Boot, Java Servlet and JSP, Django, JavaFX, openCV
- **Databases:** Oracle, MySQL
- **Automation and Integration Platforms:** MuleSoft, Workato, UiPath, SnapLogic
- **Cloud Computing Platforms:** Amazon Web Services, Microsoft Azure
- **Operating Systems:** Windows, Linux
- **Tools:** Git, Matlab, Wireshark, ns-2, ns-3, Latex

PROFESSIONAL CERTIFICATIONS

- **MuleSoft:** Certified MuleSoft Developer (Level 1)
- **Workato:** Automation Pro I, Automation Pro II, and Automation Pro III
- **SnapLogic:** SnapLogic Certified Administrator

ACHIEVEMENTS

- Our team ranked **3rd** in the **Incepta AI Hackathon, 2024**
- National Essay Writing competition: **2nd** in 2011
- National Extempore Speech competition: **3rd** in 2011, **2nd** in 2012

COMMUNITY SERVICES & EXTRACURRICULARS

Blood Donation

2016 – present

Actively respond to blood donation requests whenever possible. Received an honorary award from the BUET blood donors community, Badhan BUET.

President

Jun 2019 – Feb 2021

KanTho:BUET, a reciting club of BUET

Class Representative

Feb 2016 – Feb 2021

Represented Section A of the CSE Department, class of 2021

Member

Feb 2016 – Feb 2021

KanTho:BUET, BUET Radio, Badhan BUET, Students Association of Mymensingh

Organizer

- Inter-university reciting competitions in 2016, 2017, and 2018
- Fests and Picnics of the CSE Department
- Central cultural program by BUET in 2019

President

2011 – 2012

Child Forum, Muktagacha Area, World Vision Bangladesh

Raised awareness about sanitation, education, and leadership development for children in rural areas. Stopped several child marriages.

Extra Curricular Activities

Reciting, Acting, Debating, Anchoring, Drawing

REFERENCE

Dr. A. B. M. Alim Al Islam

Professor

Department of Computer Science and Engineering
Bangladesh University of Engineering and Technology

Email: alim_razi@cse.buet.ac.bd ↗

Website: https://cse.buet.ac.bd/faculty/faculty_detail/razi ↗

Dr. A.K.M. Ashikur Rahman

Professor

Department of Computer Science and Engineering
Bangladesh University of Engineering and Technology

Email: ashikur@cse.buet.ac.bd ↗

Website: https://cse.buet.ac.bd/faculty/faculty_detail/ashikurrahman ↗