Showkot Hosen

XAI in Cybersecurity Researcher | Cybersecurity Enthusiast

showkothosen10@gmail.com LinkedIn Portfolio GitHub Latifpur, Chittagong, Bangladesh

About

A strong research-oriented interest in cybersecurity has been developed, with a particular focus on explainable artificial intelligence (XAI) for secure and trustworthy cyber defense systems. Solid foundations in computer networking, ethical hacking, and system security have been established through academic training and hands-on projects. Current research interests center on the design and implementation of machine learning–based intrusion detection and prevention systems with enhanced interpretability to support transparent and reliable security decisions. A continuous commitment is maintained to advancing knowledge in emerging cyber threats, adversarial techniques, and explainable security analytics in preparation for doctoral research.

Expertise & Skills

Area of Expertise	**Technical Skills**
Cybersecurity	**Languages:** Python, Bash, C++
Machine Learning	**ML Tools:** Kaggle, Google Colab, Anaconda
Explainable AI (XAI)	**Security Tools:** Wireshark, Nmap, Nikto, Ettercap
Research & Experimentation	**AI Tools:** ChatGPT, Gemini, Perplexiety
Operating Systems	**Platforms:** Linux, Windows
English Proficiency	**Version Control and IDE:** Github, VS Code, Arduino IDE
Academic Writting	**Hardware:** Arduino, ESP32
Prompt Engineering	**Documentation:** LaTeX, MS Word, PowerPoint
Design and Video editing	**Design Tools:** Canva, Draw.io

Education

BSc in Electronics and Telecommunication Engineering March 2022 – June 2026
Chittagong University of Engineering and Technology (CUET) | CGPA : 3.63/4.00 Upto six Semesters *Chattogram*

- Research focus on Application of XAI in Cybersecurity, Intrusion Detection Systems (IDS), and Machine Learning

Higher Secondary Certificate 2018 – 2020
Government City College | GPA : 5.00/5.00 From Science *Chittagong*

Publications

Aircraft Detection in Satellite Images Using CNN and Sliding Window Method | *IEEE* Feb 2025
2025 International Conference on ECCE, CUET, Bangladesh
View Publication

Interpretable SQL Injection Detection: Lightweight Decision Trees | *QPAIN 2026* *Accepted*
Submitted to 2026 International Conference on QPAIN
Focus: SHAP-Enhanced Deployment and XAI.

XAI-Powered Vision: Making CNN Malware Classifiers Transparent | *QPAIN 2026* *Accepted*
Submitted to 2026 International Conference on QPAIN
Focus: Transparent CNN for Cybersecurity Frontlines.

Cybersecurity & ML Projects

1. **SEC-IoT – A Real-Time Secure Industrial IoT Monitoring & Analytics Platform**
   Python, HTML, CSS, C++, JAVA, ChatGPT, Gemini AI
2. **MLWAF – A Real-Time Machine Learning Powered Web Application Firewall**
   Python, Scikit-learn, Network Traffic Analysis. Designed supervised ML models for detecting malicious network traffic patterns.
3. **Text Steganography Detection Using Deep Learning**
   Built and trained in the Kaggle ML environment. Performed feature extraction and deep neural network optimization.
4. **Ethical Hacking Capstone CTF**
   SQL Injection, SMB Exploitation, PCAP Analysis. Solved real-world attack scenarios including web exploitation.
5. **Chrome Extension Malware Analysis & Removal**
   JavaScript, Security Analysis. Identified malicious extensions using permission and behavior analysis.
6. **Quranic Shots: Islamic Accessories E-Commerce Site**
   HTML, CSS, PHP, JS, XAMPP. Developed a full-stack e-commerce platform with secure web environment testing.
7. **Professional Portfolio Site**
   HTML, CSS. Designed and deployed a personal portfolio using W3Spaces to showcase technical projects.
8. **Infrared Communication System (Electronics Project)**
   A full hardware-based communication system utilizing infrared signals for wireless data transmission.

Experiences

Cybersecurity Research Student 2025 – Present

CUET *Chattogram, Bangladesh*

- Conducted hands-on research on IDS/IPS and ML-based cyber defense systems.
- Participated in Capture The Flag (CTF) competitions and OSINT investigations.

Cyberhunt – Cybersecurity Mentorship Lead 2024 – Present

CUET *Chattogram, Bangladesh*

- Mentor and guide departmental junior students in the fields of Cybersecurity and Machine Learning.
- Inspire students to pursue careers in ML-based cybersecurity research and development programs.

Industrial Visit

Bangladesh Satellite Company Limited (BSCL)
Industrial visit to the *Betbuniya Satellite Secondary Ground Station*, focusing on satellite communication infrastructure, ground station operations, signal monitoring, and national satellite network security.

Industrial Attachment

DigidenIT, Chawkbazar, Chattogram
Theme: Web Development, Practical Cybersecurity, Networking, and IT Infrastructure
Completed an industrial attachment emphasizing hands-on exposure to networking fundamentals, system administration, basic cybersecurity practices related to web, and real-world IT support environments.

Certifications & Credentials

S.	Certification	Vendor
1	ML & Emerging Tech	Coursera
2	AI for Cyber	Coursera
3	Python Basics	BCC
4	Certified in Cyber	(ISC)2
5	CC Specialization	Coursera
6	Ethical Hacker	Cisco
7	PenTesting & Crypto	Coursera
8	Network Analysis	Blue Team
9	Advent of Cyber	TryHackMe
10	Pre-Security	TryHackMe
11	Network Devices	Cisco
12	OS Basics	Cisco
13	Intro to Cyber	Cisco
14	Critical Infra	OPSWAT
15	Cyber Job Sim	Deloitte
16	Cyber Job Sim	Mastercard
17	Shields Up Sim	Forage
18	Cyber Professional	Diligite
19	Intro to IoT	Cisco
20	Network Basics	Cisco
21	Hardware Basics	Cisco
— End of List —		

Co-Curricular Activities

Organizer of Televerse 1.0 StealthFlags (CTF Event)
Organized and managed a cybersecurity-focused Capture The Flag (CTF) competition emphasizing stealth exploitation, vulnerability analysis, and defensive security concepts. Coordinated event logistics, challenge design themes, and participant engagement.

Additional Information

Technical Leadership: Organizer of Televerse 1.0 | Managed a national-level cybersecurity CTF competition at CUET. Led the technical team in designing defensive security challenges and coordinated logistics for 50+ participants.

Competitions: Semifinalist in Face The Case 2.0 (Case Competition); Participant in **BUET DL Sprint 4.0** (Machine Learning), **BCS CTF**, and **UAP CTF** (Cybersecurity).

Languages: English (Professional), **Bengali** (Native), **Arabic** (Elementary).