

# Shihab Ahmed

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## Research Interests

System Security, Malware Analysis, Cyber Threat Intelligence, AI in Cybersecurity

## Education

<b>Towson University, Towson, MD, USA</b> <i>PhD in Information Technology</i> GPA: 4.00/4.00	Aug 2024 – Dec 2028 (Expected)
<b>Comilla University (CoU), Cumilla, Bangladesh</b> <i>Master of Science in Information and Communication Technology</i> GPA: 3.75/4.00	Nov 2021 – Sep 2022
<b>Comilla University (CoU), Cumilla, Bangladesh</b> <i>Bachelor of Science in Information and Communication Technology</i> GPA: 3.79/4.00	Feb 2016 – Mar 2021

## Work Experience

<b>Graduate Research Assistant, Towson University</b> <i>Supervisor: Dr. Md Sajidul Islam Sajid</i> <ul style="list-style-type: none"><li>– Research Focus: System Security, Malware Analysis, GenAI for Cyber Deception Orchestration</li><li>– Utilizing Generative AI models and prompt engineering to automate the creation of cyber deception plays.</li></ul>	Aug 2024 – Present
<b>Research Assistant, Advanced Machine Intelligence Research (AMIR) Lab</b> <i>Supervisor: Dr. Mohammad Firoz Mridha</i> <ul style="list-style-type: none"><li>– Utilized NLP techniques to develop and implement aspect-based sentiment analysis models for the Bengali language.</li></ul>	Aug 2023 – Jul 2024
<b>Software Engineer, GridFlow Pro (Remote)</b> <i>Backend Developer (Django)</i> <ul style="list-style-type: none"><li>– Designed APIs using the Django REST Framework.</li><li>– Worked with cross-functional teams to communicate project requirements and proposals.</li><li>– Worked with Git, and Gitlab for version control.</li><li>– Deployed web applications on the Ubuntu server.</li></ul>	Jun 2021 – Nov 2021

## Publications

<b>SPADE: Enhancing Adaptive Cyber Deception Strategies with Generative AI and Structured Prompt Engineering</b> <i>Shihab Ahmed, ABM Rahman, Md Morshed Alam, Md Sajidul Islam Sajid</i> IEEE CCWC, Las Vegas, NV, 2025 <a href="https://doi.org/10.48550/arXiv.2501.00940">https://doi.org/10.48550/arXiv.2501.00940</a>
<b>tRF-BERT: A Transformative Approach to Aspect-Based Sentiment Analysis in the Bengali Language</b> <i>Shihab Ahmed, Moythry Manir Samia, Maksuda Haider Sayma, Md Mohsin Kabir, and M. F. Mridha</i> PLOS ONE Journal, 2024 <a href="https://doi.org/10.1371/journal.pone.0308050">10.1371/journal.pone.0308050</a>

## Technical Skills

**Languages:** Python, C++, Java, LaTeX  
**Framework:** Keras, TensorFlow, Django Rest  
**DBMS Tools:** SQL, PostgreSQL, MySQL  
**Developer Tools:** GitHub, NetBeans, Visual Studio Code, Android Studio  
**Network Simulation Tools:** OPNET Modeler, Cisco Packet Tracer  
**Front End:** HTML, CSS, Bootstrap, familiar with JavaScript  
**Video Editing Software:** Camtasia Studio 8

## Projects

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### COVID-19 Detection and Prediction Using Chest X-Ray Images

Dec 2020 – Mar 2021

Supervisor: Md. Imran Hossain

[GitHub Link](#)

- Applied deep learning techniques to develop a robust COVID-19 detection system.
- Tools Used: Python, Tensorflow

### GaanGhor

Oct 2019 – Feb 2020

Supervisor: Md. Rakib Hasan

[GitHub Link](#)

- Developed an online library management system.
- Tools Used: HTML, CSS, Bootstrap, PHP, JavaScript

### ClassOrganizer

May 2019 – Aug 2019

Supervisor: Md. Rakib Hasan

[GitHub Link](#)

- Designed and developed a mobile application for Android to streamline class scheduling for teachers and students in the ICT department.
- Tools Used: Android Studio, Java

## Awards & Achievements

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- Towson University Spring 2025 Doctoral Student Scholarship
- Best Presenter Award, IEEE CCWC 2025
- National Science and Technology Fellowship (2022-2023)
- Junior School Certificate (JSC) Scholarship, Dhaka Board, 2010

## Extracurricular Activities

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- Teacher, ICT Department, at AR Science Academy, a center for students from various schools.
- General Secretary at Comilla University IT Society (CoUITS)
- Executive Committee Member at Radio CoU
- Active Citizen at British Council

2018 – 2020

Apr 2019 – Jun 2020

Aug 2017 – Aug 2019

Nov 2016 – Dec 2016

## Certificates

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- Python (Basic) Certificate (HackerRank)
- Problem Solving (Basic) (HackerRank)
- Python for Everybody Specialization (Coursera)
- SQL (Intermediate) Certificate (HackerRank)
- SQL (Basic) Certificate (HackerRank)