

Syed Zami-Ul-Haque Navid

Tempe, Arizona

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Research Interests

- Software and Network Security
- Applications of Machine/Deep Learning
- Security of Machine/Deep Learning models
- Assistive Technology
- Social Media Analytics

Education

Arizona State University

Tempe, Arizona

PhD in Computer Science

August, 2023 - Present

- **Noteworthy Courses:** Advanced Data and Information Privacy
- **Research:** EdTech App Analysis

Bangladesh University of Engineering and Technology

Dhaka, Bangladesh

Bachelor of Science in Computer Science and Engineering

February, 2016 - February, 2021

- **CGPA:** 3.35/4.00
- **Noteworthy Courses:** Computer Security, High-Performance Database Systems, Operating Systems, Computer Architecture, Simulation and Modeling, Fault-Tolerant Systems, Microcontrollers and Microprocessors, Discrete Mathematics, Concrete Mathematics
- **Undergraduate Thesis Supervisor:** Dr. Muhammad Masroor Ali

Publication

Static Detection of Malicious Code in Programs Using Semantic Techniques

11th ICECE

Syed Zami-Ul-Haque Navid, Protik Dey, Shamiul Hasan, Muhammad Masroor Ali

2020

- Our study concentrates on unraveling the traits of malware written in the Java programming language
- We have studied the source code of several malware and identified their characteristics
- Then we expressed the characteristics mentioned above of malicious source code through Code-Ontology

Research Experience

EdTech App Analysis

Ongoing Research

- We want to find out if EdTech applications breach user privacy
- We have been analyzing network traffic
- We have also been collecting the system logs
- We want to learn if apps transmit more user data than they need

A Study of Covid-Related Fake News in Bengali on Facebook

Co-Author

- Created a dataset containing Covid-related Bengali Facebook posts and trained Transformer-based models on it
- Reported analyses on the prevalence of fake news and people's reaction
- The archived paper can be found here

Real-time Violence Detection from Videos

Volunteer Researcher

- Proposed a human-interpretable hierarchical multiple-instance learning (MILL) architecture to detect violence in surveillance videos

Classification of Warnings Raised by Static Analysis Tools

Volunteer Researcher

- Extracted metrics and information about source code
- Applied several State-of-the-Art tree classifiers (XGBoost, LightGBM, etc.) as well as LSTM, Linear Regression, and SVM classifiers on them

Skills

Languages	Python, C#, C++, SQL, Java, working knowledge in Dart and R
ML Frameworks and Libs	PyTorch, Scikit-Learn, Numpy, Pandas, HuggingFace, OpenCV, OpenPose
App Analysis Tools	Objection, Frida, MITMProxy, adb
Simulators and Tools	Cisco Packet Tracer, Wireshark, NS2, Logisim, Proteus, Protege
Dev Frameworks	.NET, Angular, Flutter, NodeJS
Miscellaneous	Bash, JavaScript, HTML, \LaTeX (Overleaf/R Markdown), git, SourceTree, GitKraken, Atmel Studio

Teaching Experience

Arizona State University

Graduate Teaching Assistant

- I have taught CSE 110, An Introduction to Java Programming

Tempe, Arizona

August, 2023 - Present

Professional Experience

Populate

Software Development Engineer in Test (Full-time Remote)

- Performed manual testing of the Populate system
- Introduced Unit Testing to augment the reliability of the system
- Managed and trained a team of new SDETs

NY, USA

January, 2023 - July, 2023

Enosis Solutions

Software Engineer (Full-time)

- Worked on both the front end and back end
- Developed features according to the client's specifications as well as fixed errors found in the production environment
- Technology: .NET framework, Angular, MS SQL Server, SSDT, SSRS

Dhaka, Bangladesh

March, 2021 - June, 2022

Notable Projects

Vasha-Sikkha

Android Team

- A mobile application (Flutter) where users can learn English through an engaging gaming experience

Tour Planner

Team Lead

- Database project that makes a tentative itinerary for a tourist, based on his/her budget

PII redaction in Classroom Audio

Course Project

- The pipeline identifies PII in the transcript of classroom audio and replaces it with dummy data corresponding to the type of PII

TCP Session Hijacking

Individual Project

- A Python tool that launches a session hijacking attack on a TCP session

Music Recommender

Individual Project

- Given a Spotify playlist, this system will recommend songs based on the perceived taste
- The system has been built with the K-Means algorithm.

Conversational AI

Individual Project

- This system relies on OpenAI's pre-trained GPT model checkpoint
- It has been fine-tuned on the Bengali (written in English letters) dataset of dialogues. It's a work in progress.

Other Projects

Individual

- Naive Phishing App (NodeJS)
- Pocket Tanks (Simple Shooting Game built using JavaFX)
- Covid Management (NodeJS, MongoDB)
- Gesture-controlled snake game built with ATmega32 microcontroller and accelerometer sensor.

Achievements

- 2017 **Rank: 137th**, Asia Dhaka Regional Site Online Preliminary Contest
2020 **Rank: 3108th**, Google Hash Code Online Qualification Round
2020 **Rank: 3529th**, Google Kick Start Round G
2020 **Winner**, COVID-19 Idea Contest by IEEE Computer Society BUET Student Branch Chapter

References

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