Syed Zami-Ul-Haque Navid

Tempe, Arizona

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Research Interests

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

Education

Arizona State University   *Tempe, Arizona*

PhD in Computer Science   *August, 2023 - Present*

- **Noteworthy Courses:** Advanced Data and Information Privacy, Software Security, Data Mining
- **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 collecting network and 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 (MIIL) 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 *Tempe, Arizona*
Graduate Teaching Assistant *August, 2023 - Present*
- I have taught CSE 110, An Introduction to Java Programming

Professional Experience

Populate *NY, USA*
Software Development Engineer in Test (Full-time Remote) *January, 2023 - July, 2023*
- 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

Enosis Solutions *Dhaka, Bangladesh*
Software Engineer (Full-time) *March, 2021 - June, 2022*
- 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

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 PIIs 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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