Mir Mehedi Ahsan Pritom

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OBJECTIVE

A cross-disciplinary researcher with 6+ years of experience in Cybersecurity and Data Science. I am looking to apply my expertise in a problem-driven environment where I can further grow and contribute with my analytical abilities for solving real-world security problems.

EDUCATION

2019 - 2022	**Doctor of Philosophy (ABD)** (CGPA: 4.00) Computer Science University of Texas at San Antonio
2015 - 2018	**Masters of Science** (CGPA: 3.70) Information Technology University of North Carolina at Charlotte
2010 - 2014	**Bachelor of Science** (CGPA: 3.64) Computer Science and Engineering University of Dhaka, Bangladesh

WORK EXPERIENCES

Laboratory of Cybersecurity Dynamics, UTSA
Research Assistant (May 2019 - Present)

Focuses on data-driven security, analyzing datasets for actionable insights, predicting malicious vs compromised websites with Interpretable ML.

Department of Computer Science, UTSA
Teaching Assistant/Lecturer (Jan 2019 - May 2019, Jan 2021 - Now)

Responsibilities include lecturing, recitations, grading, and mentoring.
- Discrete Math (CS 2233) [Lecturer] [Fall 20221, Spring 2022]
- Principle of Cybersecurity [Lecturer] [offering in Summer 2022]
- Cyber Operations (CS 4723) [Spring 2019]
- Secure Software Development and Analysis (CS 4683) [Spring 2019]
- Data Structure (CS 2124) [Spring 2021]
- Advanced Software Engineering (CS 4783) [Spring 2021]

NSF Center for Cybersecurity Analytics and Automation (CCAA), UNCC
Research Assistant (May 2016 - Aug 2017)

Involved in projects related to data-driven predictive security, threat hunting in security logs, and extraction of threat indicators with NLP from unstructured textual threat reports.

Dept. of Software & Information Systems, UNCC
Teaching Assistant (Aug 2015 - Dec 2018)

Responsibilities include mentoring students, grading, lab recitations.
- Advanced Network Security, Intro to Info Security and Privacy, Network-based App Development, IT Infrastructure II: Design and Practise, Intro to Security Analytics

Samsung Research Institute, Bangladesh
Software Engineer (Sep 2014 - Aug 2015)

Leveraged Agile SDLC method with SCRUM framework to develop web-based utility apps (e.g., free-hand writing) and gaming apps (e.g., customized minesweeper) for the Tizen mobile platform using JavaScript, JQuery, HTML/CSS

RESEARCH PROJECT HIGHLIGHTS

- **Trustworthy Decision-Support System for Malicious Websites**: Develop framework, mechanisms, and case studies with real-world blacklist data for quantifying likelihood of website maliciousness versus compromised ones along with explanations (InterpretML) and confidence for the decision-making, which can help law-enforcement for domain level intervention (e.g., domain take-down).
- **Blockchain-based Automated Cyber Security Management (CSM)**: Developed an tamper resistant and fault tolerant CSM for enterprise leveraging Ethereum blockchain where threat data were presented with bipartite graphs and simulated CSM queries and corresponding algorithms were designed for case studies. *(US Patent applied)*
- **Tackling COVID-19 Themed attacks**: Applying ML models to detect themed malicious websites against benign ones using real-world data and manually defined features. Also using ML and NLP mechanisms to detect COVID-themed health-related misinformation in Twitter.

TECHNICAL SKILLS

LANGUAGE	Java, Python, R, C/C++
DATABASES/ BIG DATA	SQL, Apache Spark (Pyspark), Hadoop MapReduce
WEB & CLOUD	Tomcat, HTML, CSS, JQuery, Web scrapping, AWS, Google Cloud
TOOLS & PLATFORMS	IBM SPSS, ELK stack, Metasploit, SIEM, Palo Alto FW, MS Project, Git, WireShark, ForitfySCA, Burpsuite
API/LIBRARIES	Tensorflow, keras, scikit-learn, NLTK, pandas, numpy, matplotlib, regex
ML/DL MODELS	Random Forest, KNN, GBM, EBM, Logistic Regression, K-means clustering, DBSCAN, RNN, LSTM, CNN, PCA
NLP/TEXT MINING	n-gram, TF-IDF, word embedding, topic modeling, BERT

LEADERSHIP

MAR 2018 - DEC 2018	**Founding President** Bangladesh Student Organization, UNCC
OCT 2017 - OCT 2018	**General Secretary** CCI Grads, UNC Charlotte

AWARDS

SEP 2020	**1st Place, COVID-19 Transdisciplinary Team Grand Challenge (Proposal Writing)** *University of Texas at San Antonio*
MAR 2017	**2nd Place, Engineering and CS Poster, 17th Graduate Research Symposium** *University of North Carolina at Charlotte*

Google Scholar link