# ARSHIYA KHAN

+1 (302) 317 6961 | arshiyak@udel.edu | https://www.linkedin.com/in/arshiyak9 | https://cybersecurit.github.io/

## EDUCATION

**University of Delaware**                                                                                            Newark, DE
*Ph.D., Network & Data Science*                                                                        Expected; May 2023
GPA: 3.77
**Thesis:** Evaluate novelty in open-ended evolutionary computation to discover generality and/or robustness in General AI

**University of Delaware**                                                                                            Newark, DE
*Master of Science, Cybersecurity*                                                                                   May 2019
GPA: 3.80
**Thesis:** Curated an Expansive Taxonomy Model for network traffic to perform machine learning (ML) based anomaly detection

## TECHNICAL SKILLS

**Languages:** Python, R, MATLAB, Bash, Java, C, C++
**Frameworks:** PyTorch, TensorFlow, Transformers, Keras, Anaconda, Google Firebase, AWS, Git, JIRA
**Tools:** OpenCV, PIL, Pandas, NumPy, scikit-learn, matplotlib, Seaborn, NLP, Flask, Google Colab, Jupyter Notebook

## WORK EXPERIENCE

**University of Delaware**                                                                                            Newark, DE
*Graduate Teaching Assistant*                                                                    February 2019 - Present
- Collaborate with professors to guide 100+ students and mid-career professionals through 5 semesters as TA. Resolve technical difficulties faced by students during security app handling and conducting ML experiments on Ubuntu systems
- Grade 50 assignments in advanced cryptography, digital forensics, and adversarial machine learning (AML)
- Created and taught 2 graduate classes on implementation of ML techniques to identify security issues in network data like pcap

**Women Plus Blockchain**                                                                                      Philadelphia, PA
*Backend & Analytics Developer*                                                                    May 2018 - August 2018
- Utilized AWS cloud console to run 25 web crawlers with beautiful soup to collect articles from blockchain news outlets. Filtered relevant articles using keyword search techniques to be published in newsletter
- Streamlined automated reports from MailChimp API to interpret user engagement. Incremented subscriber base by 17%
- Incremented subscribers by 150 by restructuring Google analytics dashboards by adding heatmaps, click maps in 4 months

**Tata Consultancy Services Ltd**                                                                              Mumbai, India
*System Engineer*                                                                              September 2014 - April 2017
- Led application team of 5 members to support and maintain a telecom banking application. Coordinated meetings with clients in 2 countries, third party vendors and onsite teams for timely resolution of critical incidents and application development
- Deployed changes to production environment after software testing of bill pay, talk time, SMS functionalities once a week
- Reduced cost of work by 90% by automating generation and error handling of daily business intelligence reports using VBA

## LEADERSHIP EXPERIENCE

- Spearheaded a team of 4 researchers at JPMC Data for Good Hackathon 2021. Designed and presented a forecasting model using logistic regression along with data augmentation techniques
- Chair graduate student peer mentoring organization at University of Delaware 2020-22 with 200 mentors and 350 mentees

## RESEARCH PROJECTS

- Developed a sound classification model using 1-Dimensional CNN for classification of multi-tonal sounds. Delivered 96% accuracy by visualizing sound waves into time-series domain
- Achieved 91% accuracy on NLP based Twitter Bot Detection model developed on Multinomial Naïve Bayes bag-of-words model

## PUBLICATION

- Authored "Detecting Attacks on IoT Devices using Featureless 1D-CNN" for IEEE Conference on Cybersecurity and Resilience 2021. Focused on removing the dependence on domain experts for malware detection in network traffic