**Arshiya Khan**

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**EDUCATION**

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| **Ph.D. Candidate (Cybersecurity)** | University of Delaware, U.S.A. | **GPA -** 3.77 | Jun 2019 - ongoing |
| **Master of Science (Cybersecurity)** | University of Delaware, U.S.A. | **GPA -** 3.80 | Aug 2017 - May 2019 |
| **Bachelor of Technology (CSE)** | M.M.M.U.T., India | **GPA -** 3.84 | Aug 2010 - Jun 2014 |

**WORK EXPERIENCE**

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| **University of Delaware (Research Assistant)** | **Feb 2019 - Ongoing** |

* Research Assistant with Dr. Chase Cotton, ECE
* Teaching Assistant for Cybersecurity in AI/ML, Introduction to Cybersecurity, System Hardening and Defense

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| **Data Science Institute, University of Delaware (Consultant)** | **Aug 2019 - Dec 2019** |

* Consolidation of university wide data science-based research, their classification, storage capacity and access.
* Interviewed 20+ faculty performing data science research in fields like geo-spatial, environment, physics, education, labor, cybersecurity, etc.

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| **Women Plus Blockchain (Backend and Analytics Developer)** | **May 2018- Aug 2018** |

* Development and scheduling python crawlers on AWS.
* Development of google analytics dashboards, heatmaps, click maps
* Implementation of SEO and automated reports with MailChimp APIs for the newsletter campaigns. Increment in subscriber base by 17%

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| **Tata Consultancy Services Ltd (System Engineer)** | **Sep 2014 - Apr 2017** |

* Team Lead of application support of 5 members for support and maintenance for web-based applications
* Automation & Development of applications to simplify manual involving Business Intelligence Reports for Airtel Money Mobile Banking platform. Reduced cost of work by 90%
* Root cause analysis for critical issues in applications and implemented incident reduction measures

**TECHNICAL SKILLS**

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| Languages | Python3/2, R, MATLAB, Bash, Java, C, C++, SQL |
| Web Technologies | JavaScript, React.js, HTML, CSS |
| Software/Frameworks | PyTorch, TensorFlow, Keras, Anaconda, Google Firebase, AWS, Git |
| Tools | OpenCV, scikit-learn, Beautiful soup, Jupyter Notebook |

**THESIS & PROJECTS**

▪ **Expansive Taxonomy Model** of network traffic to perform machine learning based anomaly detection. Time series features, behavioral features and statistical features extracted from a packet/flow/session for anomaly detection.

▪ **Sound classification** using 1-Dimensional CNN for classification of multi-tonal sound. Sounds waves are instance of amplitude distributed in time. Application of the same technical for classification of network packets. Achieved 96% accuracy.

▪ **Study of Adversarial machine learning (AML**). Defense of machine learning based image classification models from adversarial attacks which fool models into misclassification. Jpeg compression algorithms can be used as a defense mechanism as they drop pixel from an image and hence adversarial content is also dropped.

▪ **Bot Detection** on Twitter dataset using NLP techniques like Naïve Bayes bag-of-world model. The model achieved 91% accuracy.

**PUBLICATION**

▪ “A Statistical Learning Approach to Test Credibility in Smart Grid Communication Channels” submitted to

Wireless Personal Communications.

**TRIVIA**

▪ Vice-Chair EmPOWER (peer mentoring graduate student organization), University of Delaware 2020-2021.

▪ Started and organized local literature festival ‘**Litventure’18**’, wrote book reviews and conducted author interviews.