**ARSHIYA KHAN**

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**EDUCATION**

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

**WORK EXPERIENCE**

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| **University of Delaware (Graduate Teaching Assistant)** | February 2019 - Ongoing |

* Instructed Cybersecurity in AI/ML (2 semesters)
* Counseled 100+ students and professionals through 4 semesters as TA for Introduction to Cybersecurity

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| **Data Science Institute, University of Delaware (Consultant)** | August 2019 - December 2019 |

* Surveyed 20+ university wide data science-based researchers working in geo-spatial, environment, physics, education, labor, cybersecurity, etc. Questions included domain, size of datasets, applicability, etc.

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

* Set Up 25 crawlers with Beautiful soup on AWS instances to collect reports from blockchain news outlets
* Implemented SEO and automated reports with MailChimp APIs for newsletter campaigns. Increment in subscriber base by 17% of the women owned start-up
* Designed google analytics dashboards, heatmaps, click maps for 200+ subscribers

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| **Tata Consultancy Services Ltd (System Engineer)** | September 2014 - April 2017 |

* Led application support team of 5 members for support and maintenance of Airtel Money Mobile Banking platform
* Automated applications to simplify manual involving Business Intelligence reports. Reduced cost of work by 90%

**TECHNICAL SKILLS**

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| 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, NLP, Google Colab, Jupyter Notebook |

**Ph.D. THESIS (Ongoing)**

* Probing novelty in open-ended evolutionary computation to prove generality of Artificial General Intelligence (AGI)
* Restructuring safe AGI modeling techniques into quantifiable metrics

**M.S. THESIS**

* Devised **Expansive Taxonomy Model** for network traffic to perform ML based anomaly detection. Time series, behavioral and statistical features extracted from packet, flow, session representations of traffic arriving at IoT device

**ACADEMIC PROJECTS**

* Developed a **Sound classification model** using 1-Dimensional CNN for classification of multi-tonal sounds. Achieved 96% accuracy converting sound waves into time-series domain
* Investigated **Defensive techniques against Adversarial machine learning (AML**). Protecting AI from adversarial attacks forcing ML models into misclassification. Implemented Jpeg compression as image correction technique
* Achieved 91% accuracy on NLP based **Twitter Bot Detection** model developed on Naïve Bayes bag-of-words model

**PUBLICATION**

* “Detecting Attacks on IoT Devices using Featureless 1D-CNN” accepted at IEEE Conference on Cybersecurity and Resilience. Focuses on removing the dependence on domain experts for traffic detection and characterization

**LEADERSHIP EXPERIENCE**

* Chaired EmPOWER peer mentoring graduate student organization, University of Delaware 2020-2021
* Started local literature festival **Litventure’18**, Mumbai, wrote book reviews and conducted author interviews