ARSHIYA KHAN

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EDUCATION

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

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

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.

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

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

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