Shiza Ali

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Education

University of Washington June 2024 - Present
Postdoctoral Scholar

- Focus: Trust and Safety in Large Language Models

Boston University Sep. 2019 – May 2024
PhD in Computer Engineering *CGPA: 3.96/4.00*

- Focus: Applied Machine Learning, Usable Security and Privacy, Cybersafety

National University of Computer and Emerging Sciences (NUCES) Sep. 2014 – May 2018
Bachelor of Computer Science *CGPA: 3.82/4.00*

- Magna Cum Laude — 1st Position in a batch of 400 students

Experience

Graduate Researcher Aug. 2019 - May 2024
Boston University (SeclaBU) *Boston, MA*

- Developed data-driven machine-learning models to mitigate risks and abusive behavior online.
- Conducted mixed-method analysis to understand child-safety online.
- Published significant research in leading conferences, including IEEE(S&P), WebSci, CHI, CSCW etc.
- **Awarded Meta Research Ph.D. Fellowship Finalist, 2023**

Graduate Teacher's Fellow Sep. 2020 - May. 2021
Boston University *Boston, MA*

- I conducted labs for Applied Algorithms for Engineers Course (EC330) and worked with a class of 50 students to teach them the core concepts of algorithms and programming in C++.

Software Engineer Feb. 2019 - Aug. 2019
Educative, Inc *Bellevue, WA (Remote)*

- Designed and developed interactive training courses focused on Data Structures and Algorithms using Python, C++, and HTML/CSS programming languages.
- Other tasks included writing source code in various languages, project planning, stakeholder coordination, and collaboration with the software engineering team for bug fixes and new feature requests.
- Initiated discussions for UI/UX improvement of the company website by incorporating new features to improve the platform's usability.
- Collaborated with the software development team to implement Docker for the company's website.

Research Associate Feb. 2018 - Feb. 2019
Technology for People Initiative Lab, LUMS *Lahore, Pakistan*

- Conducted research in internet measurement, social media algorithm auditing, and web scraping.
- Collaborated with UC Davis doctors to design a machine-learning algorithm that detects tuberculosis using X-ray images and biomarkers.
- Collaborated on a project to create a deep learning pipeline that uses multiple video features to accurately detect child-inappropriate content on YouTube. Published at IEEE ASONAM'19.

Software Engineer Intern Jun. 2017 - Aug. 2017
Mindstorm Studios *Lahore, Pakistan*

- Served as a full-stack developer and deployed HTML5 game online.

Projects

Risk Detection Pipeline for Private Instagram Conversations
Published in ACM CHI'22 and ACM CSCW'23

- Conducted qualitative and quantitative study of media sharing habits of 100 adolescents on Instagram. This research won the ***Honorable Mention Award at ACM CHI'22**.
- Helped implement a sexual risk detection system for Instagram messages that won ***Impact Recognition Award at ACM CSCW'23**.
- Implemented a machine-learning-based multi-modal ensemble classifier that detects risky private conversations with an accuracy of 85%.

Exploring Large Language Model(LLMs) Contribution to Online Risks
Inprogress in ICWSM'24

- Conducted a thorough analysis of LLMs including threat modeling to identify weaknesses that could be exploited to create and spread harmful online content.

Reverse Engineering TikTok's Moderation Algorithm
Inprogress in WebConf'24

- Executed a mixed-methodological examination of TikTok's content moderation algorithm.
- Engineered a machine-learning algorithm using Random Forest and SVM models to detect toxic video content autonomously.

TROLLMAGNIFIER: Detecting State-Sponsored Troll Accounts on Reddit
Published in IEEE S&P'22

- Developed a machine learning-based system to detect networks of troll accounts on Reddit with an accuracy of 97% and reported 1,248 accounts to Reddit detected by the system.

Understanding the Effect of Deplatforming on Social Networks
Published in WebSci'21

- Created a machine learning-based system to identify the same users on different online platforms (Accuracy 94.5%).

Technical Skills

Languages: Python, C/C++, SQL/MYSQL, HTML/CSS, R
Libraries: Pandas, NumPy, Matplotlib, Scikit-Learn, Selenium, BeautifulSoup

Honors and Awards

- Rising Star in Social Computing and Public Policy, UIowa 2023
- Impact Recognition Award, CSCW'2023
- SIGCHI Gary Marsden Travel Award, 2023
- Meta Research Ph.D. Fellowship Finalist, 2023
- Honorable Mention Award, CHI'2022
- IEEE S&P Student Grant, 2022 *($1500)*

Links

Google Scholar: https://scholar.google.com/citations?user=wVYZPn4AAAAJ
LinkedIn: https://www.linkedin.com/in/theshizaali/