Shiza Ali

Online Security and Privacy · Machine Learning · Human Computer Interaction

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Education

Ph.D. in Computer Engineering — *Boston, MA*

Boston University — *Aug. 2019 - Present*

- Advisor: Dr. Gianluca Stringhini
- Thesis: *Tackling Toxicity Online: Developing Comprehensive Approaches for Online Risk Detection*

B.S. in Computer Science — *Lahore, PK*

National University of Computer & Emerging Sciences (NUCES) — *Aug. 2014 - May 2018*

- Magna Cum Laude | Dean's List 2014-18

Experience

Security Lab (SeclaBU) — *Boston, MA*

Doctoral Research Fellow — *Aug. 2019 - Present*

- Conducting extensive research on online privacy and the potential societal harms linked to online systems.
- Develop methodologies to detect risks and abusive behavior online.

Socio-Technical Interaction Research Lab (STIR Lab) — *Orlando, FL*

Research Assistant — *Aug. 2021 - Aug. 2022*

- Performed qualitative, and quantitative analysis (mixed-method) to gain human-centered insights into the risky interactions experienced by youth online.

Educative — *Lahore, PK*

Developer Advocate — *Feb. 2019 - Aug. 2019*

- Authored interactive and user-friendly learning courses in the fields of Machine Learning and Data Science.
- Worked closely with the development team to design features for the company website.

Technology for People Initiative Lab, LUMS — *Lahore, PK*

Research Associate — *Feb. 2018 - Feb. 2019*

- Designed and developed an AI model for YouTube to detect and block child-inappropriate content, enhancing online safety for young viewers.

Mindstorm Studios — *Lahore, PK*

Software Engineer Intern — *Jun. 2017 - Aug. 2017*

- Worked as a full-stack developer and deployed HTML5 game on Facebook.
- Collaborated with design teams and Senior Software Engineers to build customized software products.

Research Projects

Understanding Moderation on TikTok

Conducted an in-depth analysis of TikTok's content moderation practices, with a focus on the effective handling of short videos featuring hazardous drug-related hashtags as prominent case studies.

Proactive Approach to Detecting Evolving Hate Speech Online

Developed and designed a hybrid model that adapts to emerging slurs and new linguistic patterns using word embeddings to detect toxic content online.

Troll Magnifier: Detecting State-Sponsored Troll Accounts on Reddit

Developed an understanding of how troll accounts operate on Reddit and created a machine learning pipeline to detect such accounts.

Multi-modal Risk Detection Pipeline for Private Conversations

Conducted a mixed-method analysis of the private conversations on Instagram to gain human-centered insights into the risky interactions experienced by youth. Designed and developed an ensemble classifier that detects risky private conversations for youth on Instagram.

Detecting Inappropriate Content on Video Streaming Platforms

Designed and developed an AI model for YouTube to detect and block child-inappropriate content, enhancing online safety for young viewers.

Publications

Conference

- **Shiza Ali**, Afsaneh Razi, Seunghyun Kim, Ashwaq Alsoubai, Joshua Gracie, Munmun De Choudhury, Pamela J. Wisniewski, and Gianluca Stringhini. "Understanding the digital lives of youth: Analyzing media shared within safe versus unsafe private conversations on Instagram." In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI'22).

- Mohammad Hammas Saeed, **Shiza Ali**, Jeremy Blackburn, Emiliano De Cristofaro, Savvas Zannettou, and Gianluca Stringhini. "Trollmagnifier: Detecting state-sponsored troll accounts on Reddit." In 2022 IEEE Symposium on Security and Privacy (IEEE S&P'22).

- **Shiza Ali**, Mohammad Hammas Saeed, Esraa Aldreabi, Jeremy Blackburn, Emiliano De Cristofaro, Savvas Zannettou, and Gianluca Stringhini. "Understanding the effect of deplatforming on social networks." In Proceedings of the 13th ACM Web Science Conference 2021 (WebSci'21).

- Rashid Tahir, Faizan Ahmed, Hammas Saeed, **Shiza Ali**, Fareed Zaffar, and Christo Wilson. "Bringing the kid back into YouTube kids: Detecting inappropriate content on video streaming platforms." In Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (IEEE ASONAM'19).

Journal

- **Shiza Ali**, Afsaneh Razi, Seunghyun Kim, Ashwaq Alsoubai, Chen Ling, Munmun De Choudhury, Pamela J. Wisniewski, and Gianluca Stringhini. "Getting Meta: A Multimodal Approach for Detecting Unsafe Conversations within Instagram Direct Messages of Youth." Proceedings of the ACM on Human-Computer Interaction (CSCW'23).

- Afsaneh Razi, Ashwaq AlSoubai, Seunghyun Kim, **Shiza Ali**, Gianluca Stringhini, Munmun De Choudhury, and Pamela J. Wisniewski. "Sliding into My DMs: Detecting Uncomfortable or Unsafe Sexual Risk Experiences within Instagram Direct Messages Grounded in the Perspective of Youth." Proceedings of the ACM on Human-Computer Interaction (CSCW'23).

Workshops

- Afsaneh Razi, Ashwaq AlSoubai, Seunghyun Kim, Nurun Naher, **Shiza Ali**, Gianluca Stringhini, Munmun De Choudhury, and Pamela J. Wisniewski. "Instagram Data Donation: A Case Study on Collecting Ecologically Valid Social Media Data for the Purpose of Adolescent Online Risk Detection." In CHI Conference on Human Factors in Computing Systems Extended Abstracts.

- Xavier Caddle, Ashwaq Alsoubai, Afsaneh Razi, Seunghyun Kim, **Shiza Ali**, Gianluca Stringhini, Munmun De Choudhury, and Pamela Wisniewski. "Instagram data donation: A case for partnering with social media platforms to protect adolescents online." In ACM Conference on Human Factors in Computing Systems (CHI 2021)/Social Media as a Design and Research Site in HCI: Mapping Out Opportunities and Envisioning Future Uses Workshop.

- Xavier Caddle, Afsaneh Razi, Seunghyun Kim, **Shiza Ali**, Temi Popo, Gianluca Stringhini, Munmun De Choudhury, and Pamela J. Wisniewski. "MOSafely: Building an Open-Source HCAI Community to Make the Internet a Safer Place for Youth." In Companion Publication of the 2021 Conference on Computer Supported Cooperative Work and Social Computing.

- Afsaneh Razi, Seunghyun Kim, Ashwaq Alsoubai, Xavier Caddle, **Shiza Ali**, Gianluca Stringhini, Munmun De Choudhury, and Pamela Wisniewski. "Teens at the Margin: Artificially Intelligent Technology for Promoting Adolescent Online Safety." In ACM Conference on Human Factors in Computing Systems (CHI 2021)/Artificially Intelligent Technology for the Margins: A Multidisciplinary Design Agenda Workshop.

Honors & Awards

2023	**SIGCHI Gary Marsden Travel Award**, Boston University
2023	**Meta Research PhD. Fellowship**, Finalist
2022	**Best Paper: Honorable Mention Award - ACM CHI'22**, For Paper: *Understanding the Digital Lives of Youth: Analyzing Media Shared within Safe Versus Unsafe Private Conversations on Instagram*
2022	**IEEE S&P Student Grant**, Boston University
2018	**Academic Highest Honor *Magna Cum Laude***, National University of Computer and Emerging Sciences
2014-18	**Dean's Honor List**, National University of Computer and Emerging Sciences (NUCES)

Skills

Programming Python, JAVA, C++, JavaScript, SQL

Libraries PyTorch, SciPy, spaCy, BeautifulSoup, Pandas, Scikit learn, Matplotlib, Seaborn, Plotly