

# Shiza Ali

ONLINE SECURITY AND PRIVACY · MACHINE LEARNING · HUMAN COMPUTER INTERACTION

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## Education

### Boston University

PH.D. IN COMPUTER ENGINEERING

Boston, MA

Aug. 2019 - Present

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

### National University of Computer & Emerging Sciences (NUCES)

B.SC. IN COMPUTER SCIENCE

Lahore, PK

Aug. 2014 - May 2018

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

## 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).

## Research Experience

### Security Lab (SecLabU)

Boston, MA

DOCTORAL RESEARCH FELLOW

Aug. 2019 - Present

- **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.
- **Adaptive Toxic Content Moderation:** 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.
- **Understanding Deplatforming on Twitter:** Measuring the efficacy and impact of Deplatforming events on social networking sites.

### Socio-Technical Interaction Research Lab (STIR Lab)

Orlando, FL

RESEARCH ASSISTANT

Aug. 2021 - Aug. 2022

- **Understanding the Digital Lives of Youth:** A mixed-method analysis of the private conversations on Instagram to gain human-centered insights into the risky interactions experienced by youth.
- **Multi-modal Risk Detection Pipeline for Private Conversations:** Designed and developed an ensemble classifier that detects risky private conversations for youth on Instagram.

### Technology for People Initiative Lab, LUMS

Lahore, PK

RESEARCH ASSOCIATE

Feb. 2018 - Feb. 2019

- **Developing an AI Model to Detect Inappropriate Content for Children on YouTube:** Designed and developed an AI model for YouTube to detect and block child-inappropriate content, enhancing online safety for young viewers.

## Work Experience

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### Educative

DEVELOPER ADVOCATE

Lahore, PK

Feb. 2019 - Aug. 2019

- Designed interactive and user-friendly learning courses in the fields of Human-Computer Interaction, Machine Learning and Data Science
- Worked closely with the development team to design and deploy features for the company website.

### Mindstorm Studios

SOFTWARE ENGINEER INTERN

Lahore, PK

Jun. 2017 - Aug. 2017

- Worked as a full-stack developer and deployed HTML5 game on Facebook.

## Honors & Awards

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- 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)

## Services

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- 2021-23 **Research Conference Reviewer**, ACM CSCW and ACM CHI

## Teaching Experience

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- Spring'21 **Applied Algorithms for Engineers**, Boston University Boston, MA
- Fall'20 **Applied Algorithms for Engineers**, Boston University Boston, MA
- Spring'19 **Network Security**, Lahore University of Management Sciences Lahore, PK

## Skills

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

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

**Quantitative Analysis** user behavior, surveys

**Qualitative Analysis** contextual inquiry, user stories, diary studies