

SUMAIR IJAZ HASHMI

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EDUCATION

Ph.D. in Computer Science

CISPA Helmholtz Center for Information Security, Saarland University
Advisor: Katharina Krombholz

Oct. 2024 - Present
Saarbrücken, Germany

BS in Computer Science

Lahore University of Management and Sciences (LUMS) – 3.86/4.00

Aug. 2020 - May 2024
Lahore, Pakistan

PUBLICATIONS

S. I. Hashmi*, S. Kashif*, L. Gröber, K. Krombholz, M. Javed. [Mapping the Cloud: A Mixed-Methods Study of Cloud Security and Privacy Configuration Challenges](#). Network and Distributed System Security (NDSS) Symposium, 2026. (*Joint First-Authors)

D. Bhardwaj, **S. I. Hashmi**, K. Krombholz, M. Golla. [Understanding How Users Prepare for and React to Smartphone Theft](#). USENIX Security Symposium, 2025.

🏆 **S. I. Hashmi***, R. Sarfaraz*, L. Gröber, M. Javed, K. Krombholz. [Understanding the Security Advice Mechanisms of Low Socioeconomic Pakistanis](#). In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems, 2025. (Best Paper Honorable Mention; *Joint First-Authors)

S. I. Hashmi*, N. George*, E. Saqib, F. Ali, N. Siddique, S. Kashif, S. Ali, N. Bajwa, M. Javed. [Training Users to Recognize Persuasion Techniques in Vishing Calls](#). Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems, 2023. (*Joint First-Authors)

RESEARCH EXPERIENCE

CISPA Helmholtz Center for Information Security — *Doctoral Researcher*

Oct 2024 – Present

Understanding How Users Prepare for and React to Smartphone Theft

- Helped conduct a qualitative investigation into how victims of smartphone theft perceive and deal with their phones being stolen.
- Analyzed the literature, conducted interviews with 22 victims of smartphone theft, took part in thematic analysis and helped in paper-writing.
- Published an academic conference paper at USENIX Security 2025.

Understanding the Security Advice Mechanisms of Low Socioeconomic Pakistanis – Preparatory Phase Student @ CISPA

- Led a qualitative investigation into how low-income, low-literate Pakistanis learn and share security advice to adopt secure behavior. Focused on what advice they learn, how do they learn it, and why (or why not) do they share it with other people.
- Crafted a context-sensitive interview protocol to understand the security mental models, security advice, and advice sharing practices of low-income, low-literate Pakistanis. Conducted 20 semi-structured interviews with janitorial workers, domestic workers, and factory workers in a textile factory. Analyzed interview data using thematic analysis.
- Published an award-winning academic conference paper at CHI 2025.

Usable Security Group, CISPA Helmholtz Center for Information Security — *Research Intern*

June 2023 – Aug. 2023

Replication: Stories As Information Lessons of Security Advice

- Aimed to replicate a SOUPS paper on how informal stories are used as security advice sources in the Pakistani context.
- Oversaw survey translations, developed technical infrastructure for the survey, designed a context-sensitive and census-representative recruitment strategy, and conducted pilot runs on 6 student participants.

Lahore University of Management Sciences (LUMS) — *Undergraduate Research Assistant*

Sep. 2022 – Sep. 2024

Mapping the Cloud: A Mixed-Methods Study of Cloud Security and Privacy Configuration Challenges – Bachelors Thesis

- Conducted a bottom-up analysis of questions asked on Stack Overflow (SO) to uncover cloud-related security and privacy configuration challenges.
- Applied ML and NLP techniques (data extraction from Google BigQuery, data cleaning and preprocessing with Pandas, topic modeling via Latent Dirichlet Allocation, clustering via K-Means, and leveraged OpenAI GPT4 API for data annotation) to identify trends and patterns in 251.9K Stack Overflow posts.
- Conducted a qualitative analysis (open-coding) to map out the use cases, technical configuration challenges, human-centric issues, and resolution strategies mentioned in 500 Stack Overflow posts.
- Published an academic conference paper at NDSS 2026.

Training Users to Recognize Persuasion Techniques in Vishing Calls

- Designed and tested a novel intervention that leverages analogical learning to train users on the psychological persuasion principles used in scam calls.
- Developed training methodology, recruited 400+ participants, led a team of research assistants to conduct an A/B experiment on 200 student participants, conducted 18 semi-structured interviews, and performed thematic data analysis.
- Published an academic conference paper at the Extended Abstracts of CHI 2023. This project also was a finalist at NYU's CSAW MENA Research Competition in 2023.

An Educational Intervention for Phishing Emails

- Designed and tested a novel educational game to help users detect phishing emails by adopting an adversarial training approach to make users learn the psychological persuasion principles used in phishing emails.
- Developed technical infrastructure for designing the training (online website developed in Firebase, Django, React), and to test the effectiveness of the intervention (online Outlook-based email inbox developed in Firebase, Vue). Led a team of 4 research assistants to conduct a pilot study on 30 student participants and conducting an online Prolific user study on US participants.
- Conducted an A/B within and between-subjects experimental study to test the effectiveness of our intervention by applying ANOVA tests.

HONORS AND AWARDS

ACM CHI 2025 Best Paper Honorable Mention Award	2025
NYU's CSAW MENA Applied Research Competition Finalist	2023
LUMS Dean's Honor List	2020 - 2024
LUMS Merit Scholarship	2021 - 2022
LUMS Students as Co-Researchers Grant	2022

SKILLS

UX Research: Qualitative Interviews, Survey Design, Usability Testing, Field Research, Literature Reviews, Cross-team Collaboration and Communication, Presentation, Prototyping, Thematic Analysis, Heuristic Evaluation, MaxQDA, Atlas.TI

Interactive Design: Figma, CSS, HTML, Qualtrics

Programming: C++, Python, JavaScript, C#, Node JS, Firebase, Django, MongoDB, React JS, Git

Data Analysis: TensorFlow, HuggingFace, Pandas, Numpy, Scikit-Learn, SQL

Languages: Urdu (Mother Tongue), English (*TOEFL Score: 117/120*), German (A2)

REFERENCES

Dr. Katharina Krombholz | Email: office-krombholz@cispa.de

Tenured Faculty, CISPA Helmholtz Center for Information Security

Dr. Matthias Fassl | Email: matthias.fassl@gwu.edu

Collaborateur Scientifique, EPFL - Swiss Federal Technology Institute of Lausanne

Dr. Lea Gröber | Email: lgrober@icsi.berkeley.edu

Postdoctoral Fellow, International Computer Science Institute (ICSI), UC Berkeley

Dr. Mobin Javed | Email: mobin.javed@lums.edu.pk

Associate Professor, Lahore University of Management and Sciences