# WARDA USMAN

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## EDUCATION

**PhD Computer Science** *Aug 2020-Present*
*Brigham Young University, Provo, Utah*
GPA: 3.97/4.00
*Research focus*: Human-Computer Interaction and Usable Security & Privacy
*Expected Graduation*: June 2025

**BS Computer and Information Sciences** *Oct 2015-Jun 2019*
*Pakistan Institute of Engineering and Applied Sciences (PIEAS)*
Cum Laude
*Key courses learned:* Data communication, UI/UX design in web development, discrete mathematics, computer security, algorithm analysis, operating systems, software engineering, theory of automata, computer networking, operations research, calculus and analytical geometry, and database systems.

## RESEARCH PROJECTS

K. Chapman, **W. Usman**, H. Curry, X. Page, "When Young Autistic Adults Engage with Social Media., 2021-2022 (intervention study; in progress)
- Ran an initial study to discover the social media affordances as perceived by young adults on the autism spectrum
- Currently designing interventions and design improvements to reduce the unwanted consequences of using social media inspired by our initial study
- Helped design educational material to help autistic young adults spot fake profilesand practice boundary regulation on Facebook.

**W. Usman**, D. Zappala, "Understanding User Rationales and Mental Models for Adopting Secure Email", 2022 (a **survey and interview study**; in progress)

- Designed a study focused on understanding why people choose to adopt secure email services and what makes them different from who do not choose to do so
- Conducted hour-long interviews with users of secure email
- Designed and ran a survey that measures the quantitative differences between users and non-users in terms of privacy and security attitudes.

J. Conners, **W. Usman**, D. Zappala, "Exploring User Perceptions and Mental Models of Physical and Digital Security", 2022 (**in-depth interview study**; in progress)
- Designed a study to understand the user perceptions of physical and digital security
- Conducted hour-long interviews with users of smart locks for their homes, users of regular locks, users of passwords and users of hardware tokens to understand the mental models of security people have in general.
- Analyzed results to help gain generalizable insight into grassroot adoption of 2FA and hardware tokens as replacements for passwords.

**W. Usman**, D. Zappala, "Towards More Inclusive Technology: Understanding Social Media Privacy Concerns of Men vs. Women in Pakistan", 2022 (**focus groups and interview study**; in progress)
- Designed a study on discovering the privacy issues people in Pakistan have while using social media, and whether these concerns differ with gender.
- Conducted the interviews and led the focus groups to uncover opportunities for more inclusive design that meets the privacy needs of people in developing countries like Pakistan.

## WORK EXPERIENCE

### Graduate Research Assistant
*Jan 2021- Present*

*Usable Security and Privacy Lab - BYU*
- Contributed to research on adoption and usability testing of secure technologies
- Designed and ran several comparison tests, surveys, and interview studies
- Conducted inductive/deductive analyses on qualitative data, and statistical analyses on quantitative data from surveys
- Designed an in-depth qualitative interview study, from research planning, creation of research materials (including the moderator guidelines, survey, and interview questions), to conducting 1:1 hour-long interviews; thematic analyses of the interview transcripts currently in progress

### CS Undergrad Student Mentor Supervisor
*Jan 2021-Present*

*BYU CS Office of Inclusion, Diversity, and Equity*
- Oversaw groups of undergraduate mentors to assist CS students in academic counseling and course assistance
- Worked closely with CS department, Dean of CS, and other faculty

### STEM Mentor
*Jan 2020-July 202 0*

*Oxbridge Innovative Solutions*
- Worked as a STEM Mentor, Trainer, and Educator
- Led a team of four members to teach programming to primary school children

### Intern
*Jan 2019-Aug 2019*

*Higher Education Commission (HEC) Pakistan*
- Worked on a research project aimed at Traffic Congestion Management.
- Contributed in designing an economic web-based system with the goal to reduce traffic congestion by forecasting the conditions of street sections in Pakistan in real-time

### Co-founder
*Nov 2018-Jun 2019*

*Seekh-Lo*
- Won 500,000 PKR in an elevation pitch competition to create whiteboard animations in local languages of Pakistan
- Hired and supervised a team of ten students to create the videos on education and conducted in-school workshops
- Coached students on importance of education (done in Urdu/Hindi and Punjabi)

### Intern
*Jul 2017-Aug 2017*

*CyberVision Intl.*
- Designed login interfaces for websites as per clients requirement.
- Directly contacted clients, incorporating their feedback to implement additional features into existing software to improve the user experience

## AWARDS AND HONORS

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|---|---|
| Google Conference Scholarship | *Sept 2022* |
| USENIX SOUPS'22 Student Grant ($1350) | *Jul 2022* |
| Graduate Professional Development Grant ($500) | *Jan 2022* |
| USENIX Security21 Diversity Grant | *Jul 2021* |
| NSF Sponsored GREPSEC V Workshop Attendance Grant | *Jul 2021* |
| Project competition under Ministry of IT Pakistans chapter Ignite Winner (70,000 PKR) | *Nov 2018* |
| Pakistan Institute of Engineering and Applied Sciences Full Scholarship Recipient | *2017-2018* |
| Second Position Holder in SSC Board Exams (300,000 PKR) | *Aug 2013* |

## SKILLS

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|---|---|
| User-centered Privacy | Usable Security and Privacy |
| Python | JMP (Statistical Analysis Software) |
| Statistics for Research Methods | Qualitative Research Methods |

Research Methods in HCI (Experienced in Interviews, Surveys, Focus Groups, Heuristic Evaluation)

## SERVICE AND CO-CURRICULARS

**Graduate Student Delegate** *Apr 2021-Present*
BYU College of Physical and Mathematical Sciences
**Part-time Volunteer** *Jun 2019*
SOS Childrens Village, Pakistan
**Head Operations** *Jun 2019*
Mental Health Awareness Workshop, Steps College