

MUHAMMAD HASSAN

Technology for People Initiative Research Lab, Lahore University of Management Sciences

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RESEARCH INTEREST

My research interests span Networked Systems, Security and Privacy, Social Computing, and Human-Computer Interaction (HCI). Moving forward, I am interested in pursuing my Ph.D. in Computer Science with an emphasis towards my current research interests.

EDUCATION

Lahore University of Management Sciences LUMS

August 2016 - Present

Bachelor's in Computer Science

Formal Coursework: Network-Centric Computing, Human-Computer Interaction, Software Engineering, Network Security, Topics in Computer and Network, Privacy in Digital Age, Calculus, Linear Algebra and Differential Equations

Punjab Group of Colleges, Lahore

August 2014 - June 2016

Intermediate (F.Sc Pre-Engineering)

Overall Percentage: 94%

EXPERIENCE

Technology for People Initiative TPI Lab, LUMS

Jun 2019 - Present

At TPI, I work on several projects related to Security and Privacy, Human Computer Interaction, and Networked Systems, under the supervision of Fareed Zaffar.

Development Intern at Vanilla Arcade, Lahore

June - July 2018

Worked with development team on AR/VR game screens, and development of functional dynamic website for a client with Fire-base as database.

Research Intern at Al Khawarizmi Institute of Computer Science

July - August 2018

I handled the last-mile execution of projects at the Android Lab, primarily involving development, instrumentation, and testing of Android applications.

NOTABLE RESEARCH PROJECTS

Characterizing the Behavior of Application Permissions: A Longitudinal Study.

This project is based on the Description-to-Permission fidelity in android applications. This is a longitudinal study to show if an application changes its behaviour for malicious intents, reducing its fidelity.

GenBi: A study of Gender Bias in Print Media

This research project aimed to study gender bias present in print media. The objective was to perform a qualitative study on gender disparity and developing a system to mitigate the bias.

Gamifying the Human-Plant Interaction(Human-Centered Computing)

This is a Design based study of Human-Plant Interaction. In order to raise awareness about high deforestation rates, this study incorporated visual and gamification techniques to improve Human-Plant Interaction using the Human-Computer Interaction methodology.

NOTABLE COURSE PROJECTS

Peer to Peer Transfer Protocol

Implemented DHT-based storage system using Chord, a distributed lookup protocol.

Distributed and Fault Tolerant File System

Implemented a Distributed File system, while maintaining concurrency and fault tolerance.

Online Reservation and Services System

Worked with a local services club to develop a robust and scalable system for their online reservation and booking services.

Impact of Technology on Manual Labour Jobs

Behavioral study of the impact of Technology on productivity of less technical labour.

Impact of Organizational Culture on Gender in a Work-place

Behavioural study of organizational culture and challenges for Women at Workplace.

TECHNICAL SKILLS

Programming Language	C, C++, Python, Java, JavaScript
Frameworks & Tools	Pandas, MySQL, Android Studio, Firebase, React Native, Node-JS
Design & Prototyping	Adobe XD, HTML5, CSS, Balsamiq, Draw.io, Latex

ACHIEVEMENTS

- Winner of Intra-University Math Competition
- Team Member of LUMS Rugby Club
- Team member of Cricket and Basket Ball in High School