Rayhan Rashed

Email: rayhan@cs.toronto.edu
Web: rayhanrashed.github.io

RESEARCH INTERESTS

My research interest lies at the intersection of sustainability and design, use, and creation of technologies for communities at the margins. My broader interest encompasses effective civic technology & Internet, ICTD, and social computing.

EDUCATION

Bangladesh University of Engineering and Technology   March 16 - January 21
Bachelors in Computer Science and Engineering
CGPA: **3.94/4**, Department Rank: **2/120**

Notre Dame College, Dhaka   July 13 - December 15
Higher Secondary Certificate
Aggregate: **85%**, College Rank: **1/2500**

PUBLICATIONS

[1] S.M. Taiabul Hoque, **Rayhan Rashed**, Mehrab Bin Morshed, Naeemul Hassan, and Syed Ishtiaque Ahmed. "Exploring the Tensions between the Owners and the Driversof Uber Cars in Urban Bangladesh". In: *ACM Conference on Computer-Supported Cooperative Work and Social Computing*, ***ACM CSCW*** (**2021**).

[2] **Rayhan Rashed**, Aminul Hoque, Sriram Chellappan, and A.B.M. Alim-Al Islam. "Dakter Bari: Introducing Technological Intermediary to Ensure Healthcare Services to Extremely Impoverished People". In: *ACM Conference on Computer-Supported Cooperative Work and Social Computing*, ***ACM CSCW*** (**2021**).

[3] **Rayhan Rashed**, Mohammad Rashidujjaman Rifat, Priyank Chandra, and Syed Ishtiaque Ahmed. "Pandemic, Repair, and Resilience: Coping with Technology Breakdown during COVID-19 in Bangladesh". In: ***Under Review at CSCW*** (**2021**).

RESEARCH EXPERIENCE

Third Space Group, University of Toronto   January 19 – Present
Research Assistant under Prof. Syed Ishtiaque Ahmed
Ontario, Canada

• Led a project to understand the infrastructural breakdown of informal repair and recycling practices in Bangladesh due to COVID-19 and understand the communities' resilience to withstand the situation. Recruited participants, conducted semi-structured interviews, and analyzed the data using appropriate qualitative coding methods. Our manuscript is currently under review [2].

• Studying the perception and preference of computing device end-users toward informal repair and e-waste processing industry, self-repair practice, and the flow of computing devices. Created and deployed the survey, recruited participants via flyers on social media. Analyzing the survey data collected from 351 participants.

• Contributed to a project examining the local adoption of Sharing Economy ventures (e.g., Uber) in the Global South highlighting the tensions and opportunities shaped by the involvement of a new group of stakeholders– private car owners–who make money from Uber without driving their cars. Responsible for designing the questionnaire, recruiting and interviewing participants, and transcribing the data. Submitted a paper detailing our findings and design implications [1].

Computing Lab, Bangladesh University of Engineering and Technology   September 18 – Present
Undergraduate Researcher with Prof. A.B.M. Alim Al Islam
Dhaka, Bangladesh

• Contributed to a healthcare information system for resource-constrained homeless communities in urban Bangladesh that leverage technology and information intermediaries within society. Conducted semi-structured interviews with 70 homeless people and 71 intermediaries to assess the contextualized needs and inter-community relationships; designed, developed, and deployed the system. Performed statistical analysis on system usage data to examine the efficacy of the approach. The paper that resulted from this project is currently under review [3].

• Working in a project to understand adoption, availability, and predict the future demand of the Internet in large families in rural Bangladesh. Collaborated with ICT Division, Government of Bangladesh to design the survey and collect 4121 responses from field surveys conducted in rural areas over the country. Leading the quantitative analysis of survey data. Preparing a draft for CHI 2021 Student Research Competition.

Awards & Achievements

• **Cheman Ara Scholar 2019**: Academic Honor by Computer Science Department, BUET.

• **University Award for Academic Excellence** (**2019, 2018, 2017, 2016**)

• **Champion, National Science Olympiad 2015**: by Bangladesh Academy of Sciences

• **Award of Merit 2015**: Highest Academic Honor by Notre Dame College, Dhaka, Bangladesh

• **Ninth Place 2015**: Among 12,000+ candidates in BUET Entrance Exam [top 0.008%]

• **Earth Champion Fellow 2015**: Awarded by Bangladesh Youth Environmental Initiative

Academic Service

Invited Review
- CHI2021 (Case Studies)

Student Volunteer
- CSCW 2020
- UIST 2020

Teaching & Leadership

Teaching Assistant. Course: Design Thinking in HCI   June 19 - August 19
Instructor: Prof. Syed Ishtiaque Ahmed
Workshop series at BUET, Dhaka, Bangladesh

Co-Lead, Knowledge, Policy, and Sustainability Team   January 16 - June 19
Bangladesh Youth Environmental Initiative [BYEI]

Camp Mentor   2017, 2018
Team Bangladesh for International Earth Science Olympiad [IESO]

Skills

User Research: Semi-structured interviews, Surveys, Field studies, Observation, Contextual inquiry.

Data Analysis: Qualitative data analysis (e.g., coding, thematic analysis, affinity diagraming), Quantitative and Statistical analysis (e.g., R, Python), Prototyping and development (e.g., Angular, D3.js).

Languages: Python, R, Java, C/C++, SQL (Postgres), JavaScript, HTML/CSS

Frameworks & Libraries: BeautifulSoup, Numpy, Scikit-learn, Node.js, JUnit, WordPress, Pandas

Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code