

# Rayhan Rashed

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## RESEARCH INTERESTS

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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

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**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

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- [1] S M Taiabul Haque, **Rayhan Rashed**, Mehrab Bin Morshed, Naeemul Hassan, and Syed Ishtiaque Ahmed. “Exploring the Tensions between the Owners and the Drivers of 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

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**Third Space Group, University of Toronto**

January 19 – Present

Research Assistant under Prof. Syed Ishtiaque Ahmed

Ontario, Canada

- Leading 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 [3].
- 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. The paper is accepted at **CSCW** [1].
- 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.

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

- Led the ideation, design, development, and deployment of 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. Performed statistical analysis on system usage data to examine the efficacy of the approach. A paper resulting from this project has been accepted at **CSCW**[2].
- Collaborated with ICT Division, Government of Bangladesh to understand adoption, availability, and predict the future demand of the Internet in large families in rural Bangladesh. Contributed to the survey design and collection of 5000+ responses from field surveys conducted in rural areas all over the country. Leading the quantitative analysis of survey data. Draft in preparation for **CHI 2021 Student Research Competition**.

## AWARDS & ACHIEVEMENTS

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- **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

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### Invited Review

- ACM Conference on Human Factors in Computing Systems (CHI) 2021

### Student Volunteer

- ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2020
- ACM Symposium on User Interface Software and Technology (UIST) 2020

## TEACHING & LEADERSHIP

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**Teaching Assistant. Course: Design Thinking in HCI**      June 19 - August 19

Instructor: Prof. Syed Ishtiaque Ahmed

Workshop series at BUET, Dhaka, Bangladesh

**Member, Knowledge, Policy, and Sustainability Team**      January 16 - June 19

Bangladesh Youth Environmental Initiative [BYEI]

## SKILLS

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

**Data Analysis**: Qualitative data analysis (e.g., coding, thematic analysis, affinity diagramming), 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