Rayhan Rashed

Email: rayhan@cse.buet.ac.bd
Web: rayhanrashed.github.io
Phone: +880 1521 253689

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   2016 – 2021
Bachelors in Computer Science and Engineering
CGPA: **3.94/4**, Department Rank: **2/120**

Notre Dame College, Dhaka   2013 – 2015
Higher Secondary Certificate
Aggregate: **85%**, College Rank: **1/2500**

APPOINTMENT

Bangladesh University of Engineering and Technology   2021 – Present
Lecturer, Department of Computer Science and Engineering

PUBLICATIONS

C=Conference, W=Workshop/Short Paper

[C.3] Pandemic, Repair, Resilience: Coping with Technology Breakdown during COVID-19 in Bangladesh 📄 🎞
R. Rashed, M.R. Rifat, S.I. Ahmed
ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies   [**COMPASS'21**]

[C.2] Dakter Bari: Introducing Intermediary to Ensure Healthcare Services to Extremely Impoverished People 📄 🎞
R. Rashed*, M.A. Rahman*, S. Chellappan, A.B.M.A. Islam
ACM SIGCHI Conference on Computer-Supported Cooperative Work and Social Computing   [**CSCW'21**]

[C.1] Exploring the Tensions between the Owners and the Drivers of Uber Cars in Urban Bangladesh 📄 🎞
S.M.T. Haque, R. Rashed, M.B. Morshed, N. Hassan, S.I. Ahmed
ACM SIGCHI Conference on Computer-Supported Cooperative Work and Social Computing   [**CSCW'21**]

[W.2] How Healthcare Record Management Opens the Doors of Unnoticeable Vulnerabilities for Rohingya Refugees 📄
F.T. Jaigirdar, C. Rudolph, R. Rashed, N. Uddin, C. Bain, A.B.M.A. Islam
ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies   [**COMPASS'22**]

[W.1] A System-level Analysis Between Head Movements and Corresponding Traits 📄
S.A. Purabi, R. Rashed, M.M. Islam, M.N. Uddin, M. Naznin, and A.B.M.A. Islam
International Conference on Networking, Systems and Security   [**NSysS'19**]

RESEARCH EXPERIENCE

Third Space Group, University of Toronto   2019 – Present
Research Associate with Prof. Syed Ishtiaque Ahmed

• Led a project studying the infrastructural breakdown of informal repair and recycling practices in Bangladesh due to COVID-19 and the communities' resilience to withstand. Recruited participants, conducted semi-structured interviews, and analyzed the data using appropriate qualitative coding methods. Part of this work is accepted at **COMPASS 2021.**

• Contributed to a project studying the adoption of Sharing Economy services like Uber in the Global South, focusing on the involvement of private car owners who earn from Uber without driving. My responsibilities included questionnaire design, participant recruitment, interviews, and data transcription. The paper has been accepted at **CSCW 2021.**

NextGen Computing Lab, Bangladesh University of Engineering and Technology   2019 – Present
Research Associate with Prof. A.B.M. Alim Al Islam

• Led the creation and deployment of a healthcare info system for urban homeless communities in Bangladesh, utilizing technology and local intermediaries. I conducted interviews with 70 homeless individuals and 71 intermediaries to understand their needs and relationships. Statistical analysis of system data was done to gauge its effectiveness. The project's initial paper was accepted at **CSCW 2021.**

• Collaborated with ICT Division, Government of Bangladesh to understand adoption, availability, and predict the future demand of the Internet in large families and digital divide in rural Bangladesh. Contributed to the survey design and collection of 5000+ responses from field surveys conducted in rural areas allover the country. Leading the quantitative analysis of survey data. Draft in preparation for **PACM-HCI**.

AWARDS & ACHIEVEMENTS

❖ **Cheman Ara Scholar**: Academic Honor by Department of Computer Science, BUET.

❖ **University Scholarship for Academic Excellence and Deans' List** (**2016 − 2021**), BUET

❖ **Champion, National Science Olympiad, Bangladesh**: Arranged by Bangladesh Academy of Sciences

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

❖ **Ninth Place**: 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 [¶ = Recognition for Outstanding Review]

❖ **CHI** 2021, 2022, 2024[¶*2]	❖ **CSCW** 2021[¶], 2024	❖ ACM **JCSS/COMPASS** 2023, 2024

Student Volunteer

❖ **UIST** 2020, 2021	❖ **CSCW** 2020	❖ **COMPASS** 2021, 2023

TEACHING & LEADERSHIP EXPERIENCE

Lead Instructor   2021 -2023
Computer Networks [CSE 321/322], Operating Systems [CSE 313/314], BUET

Co-Organizer Workshop: Design Thinking in HCI   June - August 2019
Instructor:Prof. Syed Ishtiaque Ahmed, Workshop series at CSE, BUET

Member, Knowledge, Policy, and Sustainability Team   2016 - 2019
Bangladesh Youth Environmental Initiative [BYEI]

CONSULTANCY

❖ Vulnerability Assessment & Penetration Testing of Sonali eSheba [iOS/Android/Web. Monthly users≈1 Million]
❖ Security and Functionality Assessment of Central College Admission System, Ministry of Education, Bangladesh.
❖ Backend System Development, Central Election, Institution of Engineers, Bangladesh. [Voters ≥ 200K]

SKILLS

User Research: Semi-structured interviews, Surveys, Field studies, 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, Node.js, D3.js, Figma).
Security & Systems: Operating System (xv6), Reverse engineering (Ghidra, Hopper), Jailbreaking/Rooting, SSH, Penetration testing (SQLi, XSS, RFI, CSRF, DB vulnerability), PCI DSS, API testing, Metasploit framework
Languages: Python, R, Java, C/C++, SQL, JavaScript, HTML/CSS