

Rayhan Rashed

Research Interests

My research focuses on **adaptive human-AI systems** that model and respond to human cognitive and behavioral states to improve focus, safety, and agency. I integrate **system development, multimodal modeling, and mixed-methods experimentation** to study how intelligent interfaces improve performance and well-being.

Education

- 2024–Present **University of Michigan, Ann Arbor, Michigan**
Ph.D. Candidate in Computer Science & Engineering.
Social Computing Lab, advised by Farnaz Jahanbakhsh
- 2016–2021 **Bangladesh University of Engineering and Technology, Dhaka, Bangladesh**
M.S. & B.S. in Computer Science & Engineering.
GPA: **3.94/4.00**, Rank: **2/142**

Professional Experiences

- 2023–2024 **Saudi Authority for Data and Artificial Intelligence (SDAIA), Riyadh, Saudi Arabia**
Research Engineer. AI in Education Division.
Worked in LLM-powered personalized education platform with virtual tutors.
- 2021–2024 **Bangladesh University of Engineering and Technology, Dhaka, Bangladesh**
Lecturer.
Department of Computer Science and Engineering
- 2020–2021 **University of Toronto, Toronto, Canada**
Research Associate.
Third Space Group, advised by Ishtiaque Ahmed

Awards and Honors

- 2025 **Best Poster Award (1st Place)**
Michigan Human-Centered AI (HCAI) Symposium 2025
- Best Application of AI Award**
Michigan AI Symposium 2025
- 2024 **Rackham Merit Fellowship**
Full tuition and stipend coverage for the first year of PhD study (\$41,309 annually)
- Prime Minister's Award**
Best MS Research in ICT, Bangladesh (\$3,500)
- 2016–2021 **University Scholarship for Academic Excellence**
Bangladesh University of Engineering and Technology
- 2015 **Champion, National Science Olympiad**
Bangladesh

Publications

- 2026 [C.9] **R. Rashed**, F. Jahanbakhsh. “What If Moderation Didn’t Mean Suppression? A Case for Personalized Content Transformation.” **CHI’26** (Accepted with Minor Revisions) . [arXiv:2509.22861](https://arxiv.org/abs/2509.22861)
- [C.8] **R. Rashed**, Farnaz Jahanbakhsh. “Consumer Moderation Rights: Fixing Social-Media Defective Feed Design within FTC.” **FAccT’26** (Under Preparation).
- [C.7] E. Kim, **R. Rashed**, et al., and E. Bondy-Kelly. “Learning Together: Improving Documentation in Clinical Setting via LLM.” **IAAI’26** (Under Review).
- 2025 [C.6] **R. Rashed**, M. M. Ali, S. Sharmin, M. Bhuyan, M. A. Adnan, A. Iqbal, M. S. Hossain, M. S. Rahman, and A.B.M.A. Islam. “What a Large Scale Study Tells Us About the Digital Divide in Rural Bangladesh.” *In Proceedings of the 8th ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS’25)*. Toronto, Canada. 2025.
- 2021 [C.5] **R. Rashed**, M.R. Rifat, S.I. Ahmed. “Pandemic, Repair, Resilience: Coping with Technology Breakdown during COVID-19.” *In Proceedings of the 4th ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS’21)*. Virtual Event. 2021.
- [C.4] **R. Rashed***, M.A. Rahman*, S.A. Purabi, N. Ulfat, S. Chellappan, A.B.M.A. Islam. “DakterBari: Introducing Intermediary to Ensure Healthcare to Extremely Impoverished.” *In Proceedings of the ACM on Human-Computer Interaction (CSCW’21)*. Virtual Event. 2021.
- [C.3] S. Haque, **R. Rashed**, M.B. Morshed, N. Hassan, S.I. Ahmed. “Exploring the Tensions between the Owners and Uber Drivers in Urban Bangladesh.” *In Proceedings of the ACM on Human-Computer Interaction (CSCW’21)*. Virtual Event. 2021.
- [C.2] F.T. Jaigirdar, C. Rudolph, **R. Rashed**, N. Uddin, C. Bain, A.B.M.A. Islam. “Healthcare Record Management and Unnoticeable Vulnerabilities for Refugees.” *In Proceedings of the 4th ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS’21)*. Virtual Event. 2021.
- 2019 [C.1] S.A. Purabi, **R. Rashed**, M.M. Islam, M.N. Uddin, M. Naznin, and A.B.M.A. Islam. “A System-Level Analysis Between Head Movements and Corresponding Traits.” **NSysS’19**. Dhaka, Bangladesh. 2019.

Posters & Demos

- 2025 [A.2] **Rayhan Rashed**, Farnaz Jahanbakhsh. ”Personalized Content Transformation: A Case for User-Defined Moderation.” *Presented at the Michigan AI Symposium 2025*. **Best Application of AI Award** 🏆
- [A.1] **Rayhan Rashed**, Farnaz Jahanbakhsh. ”Personalized Content Transformation: A Case for User-Defined Moderation.” *Presented at the Michigan Human-Centered AI (HCAI) Symposium 2025*. **Best Poster Award (1st Place)** 🏆

Invited Talks

- 2025 **Stanford Trust and Safety Research Conference, Stanford, California**
“What If Moderation Didn’t Mean Suppression? A Case for Personalized Content Transformation.”

Academic Service

Program Committee

ACM IUI: 2026

ACM DIS: 2025

Invited Reviewer ★ = [Outstanding Review Recognition]

ACM CHI: 2021, 2022, 2024 [★★], 2025, 2026 [★]

ACM CSCW: 2021 [★], 2024, 2025, 2026

ACM JCSS/COMPASS: 2023, 2024, 2025

Teaching Experience

2021–2023 **Computer Networks [CSE 321/322], Lead Instructor**

Bangladesh University of Engineering and Technology

Operating Systems [CSE 313/314], Lead Instructor

Bangladesh University of Engineering and Technology

2019 **Workshop: Design Thinking in HCI, Co-Organizer**

Jun–Aug Bangladesh University of Engineering and Technology

Instructor: Prof. Ishtiaque Ahmed

Mentorship

2024–Present **Gabriel Koo**

Undergrad student at UMich

Consultancy Experience

Vulnerability Assessment & Penetration Testing of *Sonali eSheba* [iOS/Android/Web platform with 1 Million monthly users]

Security and Functionality Assessment of *Central College Admission System*, Ministry of Education, Bangladesh

Backend System Development, Central Election, Institution of Engineers, Bangladesh [210K voters]

Skills

AI/ML PyTorch; LLM/VLM fine-tuning (PEFT: LoRA/QLoRA), quantization; retrieval & reranking; RAG; small LMs on-device/edge; vision–language modeling

Experimentation SQL; A/B testing; causal inference; mixed-effects modeling; metrics design; experiment design

Development FastAPI, Flask; Celery (batch/async); AWS (EC2, S3); GPU deployment, Android

Frontend & APIs React; REST/GraphQL; JavaScript, HTML/CSS

Programming Python, R, Java, C/C++, L^AT_EX