

Md Montaser Hamid

Ph.D. Candidate, Computer Science · Oregon State University

Corvallis, OR, USA · hamidmd@oregonstate.edu · linkedin.com/in/md-montaser-hamid · [Google Scholar](https://scholar.google.com/citations?user=montaserhamid.com)
montaserhamid.com

RESEARCH OVERVIEW

I work at the intersection of **human–AI interaction**, **explainable AI (XAI)**, and **user-centric design**. My dissertation develops “*Ed for AI*”, a design framework that treats AI explanations as a teaching–learning process: instead of only applying AI to improve education, I bring educational theories into the design of XAI systems so that explanations help users learn how AI works, not just receive information. My broader research demonstrates that designing AI explanations for users whose problem-solving styles are often underserved can improve mental models of AI for *everyone*, showing a measurable “curb-cut” effect. Methodologically, I use mixed methods end to end, from theory-grounded hypothesis generation and interactive prototyping to user studies, controlled lab experiments, and qualitative and quantitative data analysis.

Interests: Human–AI Interaction · Explainable AI · User-Centric Design · AI & Education

EDUCATION

Ph.D. in Computer Science, Oregon State University

Corvallis, OR · expected Mar 2027

Dissertation: *Educational Theories’ (Potential) Impacts on Explainable AI*

Advisor: Margaret Burnett · Co-advisor: Anita Sarma

Committee: Glencora Borradaile, Karthika Mohan, Jennifer Parham-Mocello

M.S.(thesis) in Computer Science, Oregon State University

Corvallis, OR · Dec 2023

Dissertation: *Improving User Mental Models of XAI Systems with Inclusive Design Approaches*

B.S. in Computer Science & Engineering, Shahjalal University of Science and Technology

Bangladesh · 2018

PUBLICATIONS

Journal Articles

- [J1] **Hamid, M. M.**, Moussaoui, F., Noa Guevara, J., Anderson, A., Agarwal, P., Dodge, J., & Burnett, M. (2026). Inclusive Design of AI’s Explanations: Just for Those Previously Left Out, or for Everyone? *ACM Transactions on Interactive Intelligent Systems*, 16(1), Article 8. [doi:10.1145/3772074](https://doi.org/10.1145/3772074)
- [J2] Fallatah, A., **Hamid, M. M.**, Moussaoui, F. A., Chikezie, C., Erwig, M., Bogart, C., Sarma, A., & Burnett, M. (2025). Intersectional HCI on a Budget: An Analytical Approach Powered by Types. *International Journal of Human–Computer Interaction*, 1–24. [doi:10.1080/10447318.2025.2474494](https://doi.org/10.1080/10447318.2025.2474494)

Conference Papers

- [C1] Anderson, A., Moussaoui, F. A., Noa Guevara, J., **Hamid, M. M.**, & Burnett, M. (2026). “Over-the-Hood” AI Inclusivity Bugs and How 3 AI Product Teams Found and Fixed Them. *Proceedings of the 31st International Conference on Intelligent User Interfaces (ACM IUI)*. [doi:10.1145/3742413.3789068](https://doi.org/10.1145/3742413.3789068)
- [C2] Bertucci, D., **Hamid, M. M.**, Anand, Y., Ruangrotsakun, A., Tabatabai, D., Perez, M., & Kahng, M. (2022). Visual Exploration of Large-Scale Image Datasets for Machine Learning with Treemaps. *IEEE Transactions on Visualization and Computer Graphics*, 29(1), 320–330 (Proc. IEEE VIS 2022). [doi:10.1109/TVCG.2022.3209425](https://doi.org/10.1109/TVCG.2022.3209425)
- [C3] **Hamid, M. M.**, Alam, T., Rabbi, M. F., Hasan, K., Kuzminykh, A., & Amin, M. R. (2021). Emergence of Polarization and Marginalization in Online Education System of Bangladesh Due to COVID-19: Challenges and Policies to Ensure Inclusive Education. *Design, User Experience, and Usability (DUXU), HCI International 2021*, LNCS 12780, Springer. [doi:10.1007/978-3-030-78224-5_16](https://doi.org/10.1007/978-3-030-78224-5_16)
- [C4] Debnath, T., Sajnin, S., & **Hamid, M. M.** (2020). A Hybrid Approach to Design Automatic Spelling Corrector and Converter for Transliterated Bangla Words. *23rd International Conference on Computer and Information Technology (ICCIT)*, IEEE. [doi:10.1109/ICCIT51783.2020.9392742](https://doi.org/10.1109/ICCIT51783.2020.9392742)

- [C5] Alam, T., **Hamid, M. M.**, & Rabbi, M. F. (2019). An Approach to Design and Develop UX/UI for Smartphone Applications of Minority Ethnic Group. *IEEE Region 10 Conference (TENCON 2019)*. doi:10.1109/TENCON.2019.8929623
- [C6] **Hamid, M. M.**, Alam, T., Ismail, S., & Rabbi, M. F. (2018). Bangla Interrogative Sentence Identification from Transliterated Bangla Sentences. *International Conference on Bangla Speech and Language Processing (ICBSLP)*, IEEE. doi:10.1109/ICBSLP.2018.8554548

Book Chapters

- [B1] **Hamid, M. M.**, Chatterjee, A., Guizani, M., Anderson, A., Moussaoui, F., Yang, S., Escobar, I. T., Sarma, A., & Burnett, M. (2024). How to Measure Diversity Actionably in Technology. In *Equity, Diversity, and Inclusion in Software Engineering: Best Practices and Insights*. Apress. doi:10.1007/978-1-4842-9651-6_27
- [B2] **Hamid, M. M.**, Alam, T., & Rabbi, M. F. (2021). Design and Development of an ICT Intervention for Early Childhood Development in Minority Ethnic Communities in Bangladesh. In *Computationally Intelligent Systems and their Applications*, Studies in Computational Intelligence 950, Springer. doi:10.1007/978-981-16-0407-2_12

Workshop Papers

- [W1] **Hamid, M. M.**, Dodge, J., Anderson, A., & Burnett, M. (2025). “Loss in Value”: What it Revealed about WHO an Explanation Serves Well and WHEN. *CEUR Workshop Proceedings, Vol. 3957, Proceedings of the ACM IUI Workshops 2025*, 9–15. [Link](#)

Preprints

- [A1] Ahmad, Z., al Kium, A., Ahammed, M. R., **Hamid, M. M.**, Tarannum, S., Amin, M. R., & Islam, M. D. (2021). Peritraumatic Distress of COVID-19 on Physicians in Bangladesh: Implications and Policy Recommendations. *medRxiv*. doi:10.1101/2021.07.05.21250138

RESEARCH EXPERIENCE

Graduate Research Assistant, Oregon State University

Corvallis, OR · Jun 2021–Present

AgAID Institute (NSF/USDA) — Advisor: Margaret Burnett

- Developed human-centered AI technologies for farmers and agricultural stakeholders in the US, as part of the [AgAID Institute's](#) mission to improve AI-driven decision support and workforce assistance in agriculture.
- Designed and led a 69-participant between-subject controlled experiment demonstrating that users' problem-solving diversity-driven redesign of an XAI prototype significantly improved users' mental models of AI and engagement with explanations, with benefits extending to all users (“curb-cut” effect) — first-author publication in ACM TiiS.
- Co-developed *GenderMag-for-AI*, a variation of the GenderMag inclusivity evaluation method for user-facing AI products; in a field study, 3 AI product teams used it to identify 83 AI inclusivity bugs and fixes covering 47 bugs (ACM IUI 2026).
- Co-developed a type-powered analytical approach to intersectional HCI evaluation that reduces the cost of multi-population empirical studies (IJHCI 2025), and a validated survey method for actionable diversity measurement in technology (Apress 2024).

Data Interaction and Visualization Lab, DARPA Explainable AI (XAI) program — Advisor: Minsuk Kahng

- Co-developed an interactive treemap-based visualization tool for exploring large-scale image datasets and analyzing/debugging errors of object detection models (IEEE TVCG / VIS 2022).

Research Assistant, USAID Agricultural Extension Project

Sylhet, Bangladesh · Feb 2018–Apr 2018

- Evaluated the performance of ICT interventions empowering agricultural extension personnel (SAAOs and UAOs), the major stakeholders in Bangladesh's agricultural extension system.

TEACHING EXPERIENCE

Lecturer, Department of CSE, Ranada Prasad Shaha University

Narayanganj, Bangladesh · Sep 2018–Feb 2021

- Instructor of record for four undergraduate courses: Object-Oriented Programming, Software Engineering & Information System Design, Theory of Computation, and Basic Graph Theory.

Graduate Teaching Assistant, Oregon State University — CS 325: Analysis of Algorithms Spring 2021

- Graded coding assignments and exams; held weekly office hours supporting students on algorithm design and analysis.

OTHER PROFESSIONAL EXPERIENCE

Smartphone Application Developer, BRAC Early Childhood Development Program Bangladesh · 2017–2018

- Designed and developed a smartphone application for early childhood development in developing countries, deployed by BRAC, the world's largest NGO.

HONORS & AWARDS

Champion, BRACathon II — inter-university hackathon organized by BRAC 2017
Champion, IT Business Idea Competition, Islamic University of Technology ICT Fest 2017
Runner-up, Daffodil Inter-University App Contest 2017
Runner-up, Shahjalal University of Science and Technology CSE FEST Hackathon 2017

RESEARCH SKILLS & METHODS

Empirical methods	Controlled lab experiments, hypothesis testing, mixed-methods research, semi-structured interviews, surveys, usability studies, A/B testing, thematic analysis, qualitative coding
Analytical methods	GenderMag & GenderMag-for-AI, cognitive walkthrough, heuristic evaluation, inter-sectional analysis
Prototyping	Low/high-fidelity prototyping, interactive prototyping, agentic-AI (LLM-based) prototyping, Figma
Programming	Python, R, JavaScript, Svelte, Java, C#, C, SQL, MATLAB, HTML, CSS, $\text{\LaTeX}$

SELECTED GRADUATE COURSEWORK

Human–Computer Interaction · Inclusive Design · Artificial Intelligence · Machine Learning · Visual Analytics
 · Methods of Data Analysis (Statistics I & II) · Social and Ethical Issues in AI · Introduction to CS Education · Algorithms & Data Structures · Theory of Computation

REFERENCES

Available upon request. Advisors: Margaret Burnett (Distinguished Professor, Oregon State University, Email: margaret.burnett@oregonstate.edu) and Anita Sarma (Professor, Oregon State University, Email: anita.sarma@oregonstate.edu).