MD NAIMUL HOQUE

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RESEARCH INTERESTS

Human-Computer Interaction, Visual Analytics, Human-Centered AI, and Accessibility

EDUCATION

University of Maryland, College Park, MD, USA *Aug 2020 - Present*
Ph.D. in Information Studies
Human-Computer Interaction Lab (HCIL), Advisor: Niklas Elmqvist

Stony Brook University, NY, USA *Aug 2018 - May 2020*
M.S. in Computer Science
Advisor: Klaus Mueller

University of Dhaka, Dhaka, Bangladesh *2011-2015*
B.Sc. in Computer Science and Engineering

PROFESSIONAL EXPERIENCE

Graduate Research Assistant MD, USA
University of Maryland, Advisor: Niklas Elmqvist *May 2022-*

Projects: Creativity support tools; Accessible data representation.

Research Intern Virtual
Bosch Research, Advisor: Liang Gou *May 2021 - Aug 2021*

Project: interactively programming large-scale image dataset.

Graduate Teaching Assistant MD, USA
University of Maryland, College Park *Aug 2020 - April 2022*

Courses: Data Visualization (INST760); Introduction to Data Science (INST737); Advanced Data Science (INST750); Big Data Analysis (INST767)

Graduate Research Assistant NY, USA
Stony brook University, Advisor: Klaus Mueller *May 2019- Aug 2020*

Projects: Visual causal model for transparent decision making; Interactive tool for live telecasting.

PUBLICATION

Peer Reviewed Conference and Journal Papers

1. Md Naimul Hoque, Niklas Elmqvist. Dataopsy: Scalable and Fluid Visual Exploration using Aggregate Query Sculpting. *IEEE Transaction on Visualization and Computer Graphics*, 2023. (to appear)

2. Md Naimul Hoque, Bhavya Ghai, Kari Kraus, Niklas Elmqvist. PORTRAYAL: Leveraging NLP and Visualization for Analyzing Fictional Characters. *Proceedings of the ACM Conference on Designing Interactive Systems (DIS),* ACM, New York, NY, USA, 2023. (pdf) (demo)

3. Md Naimul Hoque, Md Ehtesham-Ul-Haque, Niklas Elmqvist, Syed Masum Billah. Accessible Data Representation with Natural Sounds. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI),* ACM, New York, NY, USA, 2023. https://doi.org/10.1145/3544548.3581087. (pdf)

4. Md Naimul Hoque, Wenbin He, Shekar Arvind Kumar, Liang Gou, Liu Ren. Visual Concept Programming: A Visual Analytics Approach to Injecting Human Intelligence at Scale. *IEEE Transaction on Visualization and Computer Graphics*, 2022. https://doi.org/10.1109/TVCG.2022.3209466. (pdf)

5. Md Naimul Hoque, Bhavya Ghai, Niklas Elmqvist. DramatVis Personae: Visual Text Analytics for Identifying Social Biases in Creative Writing. *Proceedings of the ACM Conference on Designing Interactive Systems (DIS),* ACM, New York, NY, USA, 2022. https://doi.org/10.1145/3532106.3533526. (pdf) (video) (github) (try it out!)

6. Md Naimul Hoque, Klaus Mueller. Outcome-Explorer: A Causality Guided Interactive Visual Interface for Interpretable Algorithmic Decision Making. *IEEE Transaction on Visualization and Computer Graphics*, 2021. https://doi.org/10.1109/TVCG.2021.3102051. (pdf) (video)

7. Md Naimul Hoque, Nazmus Saquib, Syed Masum Billah, and Klaus Mueller. Toward Interactively Balancing the Screen Time of Actors Based on Observable Phenotypic Traits in Live Telecast. *Proceedings of the ACM on Human-Computer Interaction (CSCW),* ACM, New York, NY, USA, 2020. https://doi.org/10.1145/3415225. (pdf) (video)

8. Md Naimul Hoque, Choudhury Farhan Ahmed, Nicolas Lachiche, Carson K. Leung, Hao Zhang. Reframing in Clustering. *IEEE 28th International Conference on Tools with Artificial Intelligence (ICTAI)*, 2016. (pdf)

Workshops, Posters, and Extended Abstracts

1. Bhavya Ghai, Md Naimul Hoque, Klaus Mueller. WordBias: An Interactive Visual Tool for Exploring Intersectional Social Biases Encoded in Word Embeddings. *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI)*, ACM, New York, NY, USA, 2021. (pdf) (github) (video)

2. Md Naimul Hoque, Niklas Elmqvist. 2021. Towards Using Visual Analytics to Promote Diversity, Equity, and Inclusion. *Artificially Intelligent Technology for the Margins: A Multidisciplinary Design Agenda. CHI Workshp,* 2021.

3. Md Naimul Hoque, Darius Coelho, Klaus Mueller. Examining the Visualization Practices of Data Scientists on Kaggle. *InfoVis Poster,* 2019.

4. Md Mehedi Hassan, Ashik Adnan, Asif M. Saleheen, Md Naimul Hoque. Understanding the Patterns of Crime Reports in a Popular Bangladeshi Newspaper. *Companion of ACM CSCW*, 2019. (pdf)

5. Md Naimul Hoque, Rawshan E. Fatima, Manash Mandal, Nazmus Saquib. Evaluating gender portrayal in Bangladeshi TV. *Machine Learning for the Developing World, NIPS Workshop*, 2017. (pdf)

AWARDS AND ACHIEVEMENTS

- Dr. Dana Rotman Doctoral Student Travel Awards. iSchool, University of Maryland, College Park. 2021

- Doctoral Student Research Award (DRSA). iSchool, University of Maryland, College Park. 2021. ($1000)

- Chairman's Fellowship. Stony Brook University. 2018. ($3000)