# Anna Fariha

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## Research Interests

My research focuses on various aspects of data system democratization: *enhancing usability* of data systems for both non-experts and experts, building *recommendation systems* for various data-management tasks, and *providing explanation frameworks* to enhance data and systems understanding.

- *Data systems usability*: data discovery, data evolution, data insights, data ingestion, query by example.
- *Recommendation systems:* data summarization, data wrangling.
- *Causal reasoning and explanation frameworks*: software debugging, automatic program repair, data debugging, visualization debugging, explaining data non-conformance, causal insights.
- *Others*: data constraints, data cleaning, trusted machine learning, fair machine learning, personalized text summarization, large-language models for data management, querying unstructured documents.

## Education

**Doctor of Philosophy in Computer Science** 2021
*Manning College of Information and Computer Sciences* *University of Massachusetts, Amherst, MA*

- Dissertation: Enhancing Usability and Explainability of Data Systems
- Advisor: Alexandra Meliou
- Committee members: Emery Berger, Peter Haas, Suman Nath
- CGPA: 4.00 out of 4.00

**Master of Science in Computer Science** 2020
*Manning College of Information and Computer Sciences* *University of Massachusetts, Amherst, MA*

- CGPA: 4.00 out of 4.00

**Master of Science in Computer Science and Engineering** 2011
*Department of Computer Science and Engineering* *University of Dhaka, Bangladesh*

- Thesis: A New Approach for Frequent Human Interaction Pattern Mining in Meeting Databases
- CGPA: 4.00 out of 4.00

**Bachelor of Science in Computer Science and Engineering** 2010
*Department of Computer Science and Engineering* *University of Dhaka, Bangladesh*

- Thesis: An Algorithm for Graph Mining using Efficient Graph Indexing for Evolving Database
- CGPA: 3.83 out of 4.00

## Employment History

**University of Utah** 7/2023 – present
*Assistant Professor* Salt Lake City, UT, USA
Kahlert School of Computing

**Microsoft** 6/2021 – 5/2023
*Researcher* Redmond, WA, USA
PROSE research and engineering team for AI-assisted programming
Managers: Gustavo Soares, Sumit Gulwani

**Microsoft** 5/2019 – 11/2019
*Research Intern* Bellevue, WA, USA
PROSE research and engineering team for AI-assisted programming
Mentor: Ashish Tiwari
Project: Conformance constraints and trusted machine learning

**Microsoft Research** 5/2018 – 8/2018
*Research Intern* Redmond, WA, USA
Data Management, Exploration and Mining (DMX)
Mentor: Suman Nath
Project: Adaptive interventional debugging for finding root causes of nondeterministic software bugs

**University of Massachusetts** 9/2016 – 5/2021
*Research Assistant* Amherst, MA, USA
Data Systems Research for Exploration, Analytics, and Modeling (DREAM) Lab
Manning College of Information and Computer Sciences
Supervisor: Alexandra Meliou

**Lalmatia Women's College** 1/2015 – 4/2015
*Guest Lecturer* Dhaka, Bangladesh
Department of Business Administration

**University of Dhaka** 5/2014 – 8/2016
*Lecturer* Dhaka, Bangladesh
Department of Computer Science and Engineering

**United International University** 5/2012 – 4/2014
*Lecturer* Dhaka, Bangladesh
Department of Computer Science and Engineering

**University of Liberal Arts** 10/2011 – 1/2012
*Competitive Programming Trainer* Dhaka, Bangladesh
Coach for competitive programming in preparation for ACM ICPC Programming Contests

**Structured Data Systems Limited** 9/2011 – 5/2012
*Software Engineer* Dhaka, Bangladesh
Android and Blackberry mobile applications

**University of Asia Pacific** 10/2010 – 10/2010
*Competitive Programming Trainer* Dhaka, Bangladesh
Coach for competitive programming in preparation for ACM ICPC Programming Contests

# Honors, Awards, & Achievements

| | |
|---|---|
| SIGMOD Distinguished PC member | 2024 |
| SIGMOD Distinguished PC member | 2023 |
| SIGMOD Distinguished PC member | 2022 |
| SIGMOD Comprehensive Reproducibility Award | 2022 |
| VLDB Best Demonstration Runner-up Award | 2020 |
| Jim Gray Scholarship, CICS, UMass Amherst | 2016 |
| Special Achievement Award: Bangladesh ICT Journalist Forum | 2012 |
| Special Achievement Award: Bangladesh Bangladesh Women in IT | 2012 |
| University Scholarship for result in Bachelors of Science, U of Dhaka | 2012 |
| Special Achievement Award for outstanding performances in programming contests, U of Dhaka | 2011 |
| Dean's Honor Award (top 1%), Faculty of Engineering, U of Dhaka | 2011 |
| Dean's Award, Faculty of Engineering, U of Dhaka | 2010 |
| Fatema-Iqbal Trust Scholarship, U of Dhaka | 2008 |

**Travel and Accommodation Scholarships**

| | |
|---|---|
| Invited Participant with Accommodation Support, Dagstuhl Seminar on Multimodal Data Quality, Germany | 2026 |
| Invited Participant, CRA Career Mentoring Workshop, Washington, DC | 2024 |
| Invited Participant with Accommodation Support, Logic and Algebra for Query Evaluation – Simons Institute for the Theory of Computing, Berkeley, California | 2023 |
| Invited Participant with Travel & Accommodation Support, CRA-WP Career Mentoring Workshop – Chicago, Illinois | 2023 |
| CRA-W Grad Cohort Workshop Travel and Accommodation Award, Washington DC | 2017 |

**Programming Contests**

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|---|---|
| Rank 5, ACM International Collegiate Programming Contest, Dhaka (Team: DU Resonance) | 2011 |
| Rank 1, Islamic University of Technology ICT Fest Programming Contest (Team: DU Resonance) | 2011 |
| Rank 1, Dhaka University National Collegiate Programming Contest (Team: DU Resonance) | 2011 |
| Rank 1, Dhaka University National Collegiate Programming Contest [Women] (Team: DU Felicity) | 2011 |
| Rank 2, SUST National Collegiate Programming Contest (Team: DU Resonance) | 2010 |
| Rank 6, ACM International Collegiate Programming Contest, Amritapuri (Team: DU Resonance) | 2010 |
| Rank 4, ACM International Collegiate Programming Contest, Dhaka (Team: DU Resonance) | 2010 |
| Rank 3, ACM International Collegiate Programming Contest, Dhaka (Team: DU Ouranos) | 2009 |
| Rank 515, Google Code Jam, (Individual, id: chorui12) | 2009 |
| Rank 4, AUST National Collegiate Programming Contest (Team: DU Resonance) | 2009 |

# Grants

1. **Stena Center for Financial Technology** – *Intelligent Data Summary Recommendations for Fintech Data Analysis* [PI]. Total award amount: $12,500. Award duration: Academic year: 2025–2026.
2. **One Utah Data Science Hub Seed Grant Award:** *Explaining Data Evolution* [PI]. Total award amount: $50,000. Award duration: Mar 2024–Feb 2025.
3. **CIRC: ENS/Grand. NSF CNS 2346555:** *POWDER-ENS - Enhancing and Sustaining the POWDER Platform* [Co-PI, PI: Jacobus Van Der Merwe, other co-PIs: Aditya Bhaskara, Eric Eide]. Total award amount: $4,999,980. Award duration: Oct 2024–Sep 2028.
4. **CRA-WP Distributed Research Experiences for Undergraduates (DREU):** *Summer support for two students*. Total award amount: $14,000. Award duration: Summer 2024.
5. **USHE: Computer Science Targeted Workforce Application:** *Training the Next Generation of Database Engineers: Responsible, User-Centric, and Efficient Data Management* [led by Jeff Phillips]. Teaching grant for developing a new course: *Human-centered Data Management*. Academic year: 2023–2024.
6. **Microsoft Research Dissertation Grant**. Total award amount: $25,000. Academic year 2020–2021.

# Publications

## Journal and Conference Publications


[1] Zifan Liu, Shaleen Deep, Anna Fariha, Fotis Psallidas, Ashish Tiwari, and Avrilia Floratou. Rapidash: Efficient Detection of Constraint Violations. *Proc. VLDB Endow.*, 17(8):2009–2021, 2024

[2] Anjali Singh, Anna Fariha, Christopher Brooks, Gustavo Soares, Austin Z. Henley, Ashish Tiwari, Chethan M, Heeryung Choi, and Sumit Gulwani. Investigating Student Mistakes in Introductory Data Science Programming. In *SIGCSE*, pages 1258–1264. ACM, 2024

[3] Rohan Bavishi, Harshit Joshi, José Cambronero, Anna Fariha, Sumit Gulwani, Vu Le, Ivan Radicek, and Ashish Tiwari. Neurosymbolic Repair for Low-code Formula Languages. *Proc. ACM Program. Lang.*, 6(OOPSLA2):1093–1122, 2022

[4] Sainyam Galhotra, Anna Fariha, Raoni Lourenço, Juliana Freire, Alexandra Meliou, and Divesh Srivastava. DataPrism: Exposing Disconnect between Data and Systems. In *SIGMOD*, pages 217–231. ACM, 2022

[5] Maliha Tashfia Islam, Anna Fariha, Alexandra Meliou, and Babak Salimi. Through the Data Management Lens: Experimental Analysis and Evaluation of Fair Classification. In *SIGMOD*, pages 232–246. ACM, 2022

[6] Anna Fariha, Ashish Tiwari, Arjun Radhakrishna, Sumit Gulwani, and Alexandra Meliou. Conformance Constraint Discovery: Measuring Trust in Data-Driven Systems. In *SIGMOD*, pages 499–512. ACM, 2021 (Comprehensive Reproducibility Award)

[7] Anna Fariha, Suman Nath, and Alexandra Meliou. Causality-Guided Adaptive Interventional Debugging. In *SIGMOD*, pages 431–446. ACM, 2020

[8] Anna Fariha and Alexandra Meliou. Example-Driven Query Intent Discovery: Abductive Reasoning using Semantic Similarity. *Proc. VLDB Endow.*, 12(11):1262–1275, 2019

[9] Anna Fariha, Chowdhury Farhan Ahmed, Carson K. Leung, Md. Samiullah, Suraiya Pervin, and Longbing Cao. A New Framework for Mining Frequent Interaction Patterns from Meeting Databases. *Eng. Appl. Artif. Intell.*, 45:103–118, 2015

[10] Amit Mandal, Mehedi Hasan, Anna Fariha, and Chowdhury Farhan Ahmed. GSCS - Graph Stream Classification with Side Information. In *APWeb*, pages 389–400, 2015

[11] Md. Samiullah, Chowdhury Farhan Ahmed, Anna Fariha, Md. Rafiqul Islam, and Nicolas Lachiche. Mining frequent correlated graphs with a new measure. *Expert Syst. Appl.*, 41(4):1847–1863, 2014

[12] Shafaet Ashraf, Sheikh Muhammad Sarwar, Md. Abeed Hassan, Saifuddin Md. Tareeq, and Anna Fariha. An Efficient Method for Extracting Subtrees against Forest Query. In *IMCOM*, pages 98:1–98:7. ACM, 2015

[13] Anna Fariha, Chowdhury Farhan Ahmed, Carson Kai-Sang Leung, S. M. Abdullah, and Longbing Cao. Mining Frequent Patterns from Human Interactions in Meetings Using Directed Acyclic Graphs. In *PAKDD*, pages 38–49, 2013

[14] Md. Samiullah, Chowdhury Farhan Ahmed, Manziba Akanda Nishi, Anna Fariha, S. M. Abdullah, and Md. Rafiqul Islam. Correlation Mining in Graph Databases with a New Measure. In *APWeb*, pages 88–95, 2013

[15] Shariful Islam, Anna Fariha, Chowdhury Farhan Ahmed, and Byeong-Soo Jeong. EGDIM: Evolving Graph Database Indexing Method. In *ICUIMC*, pages 56:1–56:10, 2012

## Short, Demonstration, and Workshop Papers

[16] Bhavya Chopra, Ananya Singha, Anna Fariha, Sumit Gulwani, Chris Parnin, Ashish Tiwari, and Austin Z. Henley. Challenges in Using Conversational AI for Data Science. *HILDA@SIGMOD*, 2025

[17] Shiyi He, Alexandra Meliou, and Anna Fariha. ChARLES: Change-Aware Recovery of Latent Evolution Semantics in Relational Data. *SIGMOD*, 2025

[18] Ankita Sharma, Jaykumar Tandel, Xuanmao Li, Lanjun Wang, Anna Fariha, Liang Zhang, Syed Arsalan Ahmed Naqvi, Irbaz Bin Riaz, Lei Cao, and Jia Zou. DataMorpher: Automatic Data Transformation based on Large Language Models. *ICDE*, 2025

[19] Whanhee Cho and Anna Fariha. UTOPIA: Automatic Pivot Table Assistant. *Proc. VLDB Endow.*, 2024

[20] Bhavya Chopra, Anna Fariha, Sumit Gulwani, Austin Z. Henley, Daniel Perelman, Mohammad Raza, Sherry Shi, Danny Simmons, and Ashish Tiwari. CoWrangler: Recommender System for Data-Wrangling Scripts. In *SIGMOD*. ACM, 2023

[21] El Kindi Rezig, Anshul Bhandari, Anna Fariha, Benjamin Price, Allan Vanterpool, Andrew Bowne, Lindsey McEvoy, and Vijay Gadepally. Examples are All You Need: Iterative Data Discovery by Example in Data Lakes. In *CIDR*, 2022

[22] El Kindi Rezig, Anshul Bhandari, Anna Fariha, Benjamin Price, Allan Vanterpool, Vijay Gadepally, and Michael Stonebraker. DICE: Data Discovery by Example. *Proc. VLDB Endow.*, 14(12):2819–2822, 2021

[23] Nishant Yadav, Matteo Brucato, Anna Fariha, Oscar Youngquist, Julian Killingback, Alexandra Meliou, and Peter Haas. SUBSUME: A dataset for subjective summary extraction from Wikipedia documents. In *New Frontiers in Summarization@EMNLP*, pages 131–141, 2021

[24] Anna Fariha, Ashish Tiwari, Alexandra Meliou, Arjun Radhakrishna, and Sumit Gulwani. CoCo: Interactive Exploration of Conformance Constraints for Data Understanding and Data Cleaning. In *SIGMOD*, pages 2706–2710. ACM, 2021

[25] Anna Fariha, Ashish Tiwari, Arjun Radhakrishna, and Sumit Gulwani. ExTuNe: Explaining Tuple Non-conformance. In *SIGMOD*, pages 2741–2744. ACM, 2020

[26] Anna Fariha, Matteo Brucato, Peter J. Haas, and Alexandra Meliou. SuDocu: Summarizing Documents by Example. *Proc. VLDB Endow.*, 13(12):2861–2864, 2020 (Best Demonstration Runner Up Award)

[27] Anna Fariha, Sheikh Muhammad Sarwar, and Alexandra Meliou. SQuID: Semantic Similarity-Aware Query Intent Discovery. In *SIGMOD*, pages 1745–1748. ACM, 2018

[28] Quazi Marufur Rahman, Anna Fariha, Amit Mandal, Chowdhury Farhan Ahmed, and Carson K. Leung. A Sliding Window-Based Algorithm for Detecting Leaders from Social Network Action Streams. In *IEEE/WIC/ACM WI-IAT*, pages 133–136, 2015

### PhD Thesis

[29] Anna Fariha. *Enhancing Usability and Explainability of Data Systems*. PhD thesis, University of Massachusetts Amherst. `https://scholarworks.umass.edu/dissertations_2/2311/`

## Software, Educational Content, and Patents

- SAGE: Data-Semantics-Aware Recommendation of Diverse Pivot Tables. Link
- ChARLES: Change-Aware Recovery of Latent Evolution Semantics in Relational Data. Link
- ExDis: Explaining Disparate Trends. Link
- UTOPIA: Automatic Pivot Table Assistant. Link
- SQuID: Semantic similarity-aware Query Intent Discovery. Link
- Conformance Constraints Discovery: Measuring Trust in Data-Driven Systems (Winner of the ACM SIGMOD 2022 Most Reproducible Paper Award). Link
- SubSumE Dataset for Subjective Document Summarization. Link
- A Data Management Perspective on Fair Classification: An Experimental Analysis and Evaluation. Link
- Educational video on "Research in Computer Science (Databases/Data Management Track)". Link
- Bavishi, R. J., Cambronero Sánchez, J. P., **Fariha, A.**, Gulwani, S., Le, V. M., Radicek, I., Simmons, D. G., & Tiwari, A. (2025). Language-agnostic computer program repair engine generator (U.S. Patent No. 12,265,789). U.S. Patent and Trademark Office.
  Link: `https://patents.google.com/patent/US12265789`
- Deep, S., Liu, Z., Tiwari, A., **Fariha, A.**, Floratou, A., & Pasallidas, F. (2024). System and method for fast constraint discovery on relational data (U.S. Patent Application No. 18/060,500). United States Patent and Trademark Office.
  Link: `https://patents.google.com/patent/US20240176802A1/en`

## Panels and Proposal Reviews

- Panelist – Grad-CS Women Panel on "Q&A Session for Women Graduate Students in Computer Science", KSoC, University of Utah — 2025
- Reviewer – Israel Science Foundation — March, 2025
- Panelist – Northwest Database Society Annual Meeting: Panel on AI and Data Management — February, 2024
- Panelist – NSF Information and Intelligent Systems division (IIS) — 2023
- Panelist – NSF's CSGrad4US Panel: "What I wish I knew before I started graduate school" — October, 2023
- Panelist – SIGMOD New Researcher Symposium — June, 2022
- Round Table Chair – VLDB: Interactive Querying and Visualization for Large Data — August, 2021

# Invited Talks

- *Understanding Data through Change Summarization and Causal Disparity Explanations*
  - Data Science Seminar, University of Utah — October, 2025
  - TDSAI Lab, Department of Computer Science, Institute of Science Tokyo — May, 2025
  - Onizuka Lab, Osaka University — May, 2025
  - Database Seminar, Cornell University — April, 2025
- *Explaining Data Evolution*
  - DELPHI Data Science Symposium, University of Utah — November, 2024
- *Recent Trends in Scalable and Human-centric Data Systems*
  - Research Challenges in Computing Seminar Series, University of Utah — October, 2023
- *Through the Data Management Lens: Experimental Analysis and Evaluation of Fair Classification*
  - Bias, Ethics and Trustworthiness in Data Science and AI event, University of Utah — September, 2023
- *Blame the data, not the system: how data constraints can help in trustworthy machine learning and explain causes of data-system malfunction*
  - Data Science Lecture Series, University of Utah — September, 2023
  - University of Washington, Northwest Database Society — November, 2021
- *Blame the data, not the system: How data profiles can help explain causes of data-system malfunction*
  - Northwest Database Society (NWDS) Annual Meeting — May, 2023
- *Enhancing usability and explainability of data systems*
  - Database Seminar, University of California San Diego (virtual) — April, 2023
  - Cornell University — April, 2022
  - Georgia University of Technology — April, 2022
  - University of California, Santa Barbara — March, 2022
  - University of Minnesota (virtual) — March, 2022
  - University of Waterloo (virtual) — March, 2022
  - University of Utah — February, 2022
  - University of Toronto (virtual) — February, 2022
  - Pennsylvania State University (virtual) — February, 2022
  - EPIC meeting, University of California, Berkeley (virtual) — February, 2022
  - Ohio State University (virtual) — January, 2022
  - CSAIL, Massachusetts Institute of Technology (virtual) — October, 2021
  - Microsoft (virtual) — January, 2021
  - Megagon Labs (virtual) — February, 2021
  - University of Pennsylvania (virtual) — February, 2021
  - DATA Lab, Northeastern University (virtual) — January, 2021

# Teaching

- **University of Utah**
  - CS 6959/3960 - Human-Centered Data Management (graduate + undergraduate) — Spring 2026
  - CS 6530 - Advanced Database Systems (graduate) — Fall 2025
  - CS 6959/3960 - Human-Centered Data Management (graduate + undergraduate) — Spring 2025
  - CS 5353/6353 - Deep Learning (graduate + undergraduate) — Fall 2024
  - CS 6959/3960 - Human-Centered Data Management (graduate + undergraduate) — Spring 2024
  - CS 5353/6353 - Deep Learning (graduate + undergraduate) — Fall 2023
- **University of Dhaka, Bangladesh**
  - CSE 1201 - Fundamentals of Programming (undergraduate) — Spring 2014
  - CSE 1211 - Fundamentals of Programming Lab (undergraduate) — Spring 2014

  - CSE 1102 - Discrete Mathematics (undergraduate) Fall 2014
  - CSE 2101 - Data Structures and Algorithms (undergraduate) Spring 2015
  - CSE 2111 - Data Structures and Algorithms Lab (undergraduate) Spring 2015
  - CSE 3113 - Microprocessor and Assembly Language Lab (undergraduate) Fall 2015
  - CSE 1111 - Fundamentals of Computer and Computing Lab (undergraduate) Fall 2015
  - CSE 2112 - Object Oriented Programming Lab (undergraduate) Spring 2016
  - CSE 2212 - Design and Analysis of Algorithms Lab (undergraduate) Spring 2016
  - CSE 4111 - Artificial Intelligence Lab (undergraduate) Spring 2016

- **United International University, Bangladesh**
  - CSI 219 - Discrete Mathematics (undergraduate)
  - CSI 121 - Structured Programming Language (undergraduate)
  - CSI 122 - Structured Programming Language Laboratory (undergraduate)
  - CSI 228 - Algorithms Laboratory (undergraduate)
  - CSI 233 - Theory of Computing (undergraduate)
  - CSI 341 - Artificial Intelligence (undergraduate)
  - CSI 342 - Artificial Intelligence Laboratory (undergraduate)

# Student Supervision

## PhD Advisor: Current

- Whanhee Cho Fall 2023–present
- Anirudh Kamath Fall 2025–present
- Shamit Fatin Fall 2025–present
- Aritra Mazumder Fall 2025–present

## PhD Advisor: Past

- Chetan Bajaj Spring 2025
- Shiyi He Fall 2023–Fall 2024

## Thesis Committee Member

- Anirudh Kamath (MS) Spring 2025
- Kutay Eken (MS) Spring 2026

## Masters & Undergraduate

- University of Utah
  - Kuangfei Long, Boston University Summer 2024 – Present
  - Tal Blau, Technion - Israel Institute of Technology Spring 2024 – Present
  - Shreya Raj, UMass Amherst Summer 2024 – Fall 2024
  - Vijaysurya Vempati (MS) Fall 2024
  - William Erignac Summer 2024
  - Ziming Wang Fall 2024
  - Holden Ellsworth (MS) Summer 2024
  - Bhavya Chopra, University of California, Berkeley Summer 2024
  - Yuqing Wang, University of Wisconsin-Madison (DREU by CRA, Project Report [30]) Summer 2024
  - Rania Saber, University of California-Riverside (DREU by CRA, Project Report [31]) Summer 2024
  - Qiaoyi Cai Fall 2023

- University of Dhaka
  - Quazi Marufur Rahman (MS) 2015
  - Amit Mandal 2015
  - Mehedi Hasan 2015
  - Nitish Ranjan Bhowmik 2015

- Kazi Mazbah Uddin 2015

### Mentorship

- Microsoft
  - Bhavya Chopra (Predoctoral Research Fellow) [PhD student at UC Berkeley] 2022–2023
  - Yang Shi (Research Intern) [Assistant Professor at Utah State University] 2022
  - Chethan Mahadevaswamy (Predoctoral Research Fellow) [Data Scientist at Microsoft] 2021–2022
- University of Massachusetts Amherst
  - Maliha Islam (PhD) [Now at Microsoft] 2020–2021
  - Hasnain Heickal (PhD) 2021–2022
  - Oscar Youngquist (MS) 2021–2022
  - Julian Killingback (MS) 2021
  - Kanchi Masalia (MS) 2020
  - Lucy Cousins (MS) 2019–2021
  - Genglin Liu (Undergrad) 2020
  - Armand Asnani (Undergrad) 2019–2020
  - Nischal Dave (Undergrad) 2019
  - Zoey (Jingyi) Sun (Undergrad from Smith College) 2018
  - Lauren Beryl Larson (REU) (Undergrad from Wellesley College) 2017
  - Michael Satanovsky (High-school Intern from Hopkins School) 2017

# Professional Service

## Internal Service

- Member, Course Review Sub Committee, KSoC 2025
- Core Member, Utah Center For Data Science 2025–present
- Faculty liaison for the Graduate Student Advisory Committee (GradSAC), KSoC 2025–present
- Member, Committee to Develop BS in Artificial Intelligence, KSoC 2025
- Member, Faculty Recruiting Committee, KSoC 2025
- Graduate Admission Committee, KSoC 2025
- Member, Research Support/Opportunities Committee, KSoC 2024–present
- Panelist, Graduate Student Mentoring Panel on "How to get a job in industry?", KSoC 2024
- Founder and Advisor, Grad-CS Women, KSoC (`gradcswomen-utah.github.io`) 2024–2025
- Graduate Admission Committee, KSoC 2024
- Faculty Advisor, Women in Computing (`wic.utahclubs.org`) 2023–2025
- Mentor of 1st Year PhD Student (Ishrat Jahan Eliza), KSoC 2023
- Co-founder of UtahDB Research Center (`mod.cs.utah.edu`) 2022–present

## External Service

### Conference Service

- Chair, Workshop on Human-In-the-Loop Data Analytics (HILDA), at SIGMOD (`hilda.io/2026/`) 2026
- Program Committee, SIGMOD (research track) 2027
- Chair, New Researcher Symposium and Mentorship, SIGMOD 2026
- Chair, Publication and Proceedings, ICDE 2026
- Session Chair, "Data Models & Interfaces" at SIGMOD 2025
- Program Committee, SIGMOD (research track) 2026
- Chair, Data-AI Systems (DAIS) Workshop, co-located with ICDE (`dais-workshop-icde.github.io`) 2025
- Program Committee, ICDE (research track) 2025
- Program Committee, VLDB (demonstration track) 2025
- Program Committee, VLDB (research track) 2025
- Program Committee, SIGMOD (demonstration track) 2025

- Program Committee, SIGMOD (research track) 2025
- Program Committee, GUIDE-AI: SIGMOD Workshop 2024
- Program Committee, ICDE (demonstration track) 2024
- Program Committee, SIGMOD (demonstration track) 2024
- Program Committee, SIGMOD (research track) 2024
- Program Committee, ICDE (Ph.D. Symposium) 2023
- Program Committee, SIGMOD (research track) 2023
- Program Committee, VLDB (research track) 2023
- Program Committee, SIGMOD (research track) 2022
- Program Committee, VLDB (research track) 2022
- Program Committee, EDBT (demonstration track) 2022
- Program Committee, SIGMOD (research track) 2021
- Session chair, EDBT 2021
- Program Committee, EDBT (demonstration track) 2021
- Program Committee, VLDB (demonstration track) 2021

## Other Reviewing and Community Service

- Reviewer, Elsevier Information Systems Journal 2025
- Mentor of Xuan Luo (Simon Fraser University) at New Researcher Symposium, SIGMOD 2024
- Reviewer, the TKDE Journal 2024
- Reviewer, the VLDB Journal 2023
- Reviewer, the VLDB Journal 2021
- Reviewer, UIST 2021
- External reviewer, CHI 2021
- External reviewer, SIGMOD 2018–2020

## Problem Setter & Judge of Competitive Programming Contests

- State University Bangladesh Inter-University Programming Contest, Bangladesh 2015
- SAARC Programming Contest, Bangladesh University, Bangladesh 2014
- Islamic University of Technology ICT Fest, Bangladesh 2014
- SAARC Programming Contest, Bangladesh University, Bangladesh 2013
- Bangladesh Informatics Olympiad, National Round, Bangladesh 2013
- North South University Inter-University Programming Contest, Bangladesh 2013
- ACM International Collegiate Programming Contest, Dhaka, Bangladesh 2012