

# Md Dilshadur Rahman

Postdoctoral Researcher, HIDIVE Lab, Harvard Medical School

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RESEARCH INTERESTS   Data Visualization & Visual Computing · Human-Computer Interaction · Human-AI Interaction in Visualization · Computing Education

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## EDUCATION

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- Aug 2022 – Sep 2026   **Doctor of Philosophy in Computer Science**  
*Kahlert School of Computing & Scientific Computing and Imaging (SCI) Institute, University of Utah*  
Dissertation: *Design Space and Tooling for Annotations in Visualizations*  
Advisor: Dr. Paul Rosen
- Aug 2022   **Master of Science in Computer Science**  
*Department of Computer Science and Engineering, University of South Florida*
- Mar 2017   **Bachelor of Science in Computer Science and Engineering**  
*Department of Computer Science and Engineering, Khulna University of Engineering and Technology (KUET)*

## RESEARCH APPOINTMENTS

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- Oct 2026 – Present   **Postdoctoral Researcher**  
*HIDIVE Lab, Harvard Medical School*  
Supervisor: Dr. Nils Gehlenborg
- Aug 2022 – Sep 2026   **Research Assistant**  
*Scientific Computing and Imaging Institute, University of Utah*  
Supervisor: Dr. Paul Rosen
- Aug 2021 – Aug 2022   **Research Assistant**  
*Department of Computer Science & Engineering, University of South Florida*  
Supervisor: Dr. Paul Rosen

## TEACHING APPOINTMENTS

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- Direct Classroom Teaching*
- Aug 2021 – May 2022   **Graduate Instructor**  
*University of South Florida, Computer Science & Engineering*  
IT Computer Networking Lab (Fall 2021) · Computer Architecture Lab (Spring 2022)

- May 2020 – Aug 2020 **Instructor of Record**  
*University of Arizona, Computer Science*  
 Introduction to Computer Programming II (Summer 2020)
- Sept 2017 – Aug 2019 **Lecturer**  
*Daffodil International University, Computer Science & Engineering*  
 Discrete Mathematics · Data Structures · Programming and Problem Solving · Systems Analysis and Design · Operating Systems · Data Communications
- May 2017 – Sept 2017 **Lecturer**  
*University of Information Technology and Sciences, Computer Science & Engineering*  
 Microprocessors · Computer Architecture · Database System Management
- Teaching Support Roles*
- Aug 2024 – Dec 2024 **Graduate Teaching Assistant**  
*University of Utah, Kahlert School of Computing*  
 Visualization for Data Science (Fall 2024)
- Jan 2023 – May 2023 **Teaching Mentee**  
*University of Utah, Kahlert School of Computing*  
 Computational Geometry (Spring 2023)
- Aug 2021 – May 2022 **Graduate Teaching Assistant**  
*University of South Florida, Computer Science & Engineering*  
 Interactive Data Visualization (Spring 2022) · IT Security Systems (Fall 2021)
- Jan 2021 – Aug 2021 **Graduate Teaching Assistant**  
*University of Arizona, Computer Science*  
 Data Visualization (Spring 2021) · Introduction to Computer Programming II (Summer 2021)

## PUBLICATIONS

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### *Journal articles*

- J1 **Designing for Engagement: A Comparison of Canvas and a Visual Peer Review Dashboard**  
 Alon Friedman, **Md Dilshadur Rahman**, Ly Dinh, Paul Rosen  
*ACM Transactions on Computing Education*, 2026  
[doi:10.1145/3800962](https://doi.org/10.1145/3800962)

- J2      **Designing Annotations in Visualization: Considerations from Visualization Practitioners and Educators**  
**Md Dilshadur Rahman**, Devin Lange, Ghulam Jilani Quadri, Paul Rosen  
*Computer Graphics Forum*, 2026 · Proc. of Eurographics/IEEE VGTC Conference on Visualization (EuroVis)  
[doi:10.1111/cgf.70435](https://doi.org/10.1111/cgf.70435) · [Project site](#)
- J3      **A Qualitative Analysis of Common Practices in Annotations: A Taxonomy and Design Space**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Bhavana Doppalapudi, Danielle Szafir, Paul Rosen  
*IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG)*, 2025 · Proc. of IEEE VIS 2024  
22% acceptance rate · [doi:10.1109/TVCG.2024.3456359](https://doi.org/10.1109/TVCG.2024.3456359) · [Project site](#)
- J4      **A Survey on Annotations in Information Visualization: Empirical Studies, Applications, and Challenges**  
**Md Dilshadur Rahman**, Bhavana Doppalapudi, Ghulam Jilani Quadri, Paul Rosen  
*IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG)*, 2025  
[doi:10.1109/TVCG.2025.3600957](https://doi.org/10.1109/TVCG.2025.3600957) · [Project site](#)
- J5      **Exploring Annotation Taxonomy in Grouped Bar Charts: A Qualitative Classroom Study**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Danielle Szafir, Paul Rosen  
*Information Visualization*, 2025  
[doi:10.1177/14738716241270247](https://doi.org/10.1177/14738716241270247) · [Project site](#)
- Conference and workshop papers*
- C1      **Guidelines Are Not Rules: Characterizing Terminologies around Visualization Design Guidelines**  
Anna L. Chinni, **Md Dilshadur Rahman**, Bon Adriel Aseniero, Petra Isenberg, Kushin Mukherjee, Ghulam Jilani Quadri, Paul Rosen, Karen B. Schloss, Daniel Weiskopf  
*IEEE BELIV (co-located with IEEE VIS)*, 2026  
Accepted; to appear · [arXiv:2608.27842](https://arxiv.org/abs/2608.27842) · [Project site](#)
- C2      **Chart-Supported or Model-Supplied? Examining MLLM-Generated Claims for Accessible Visualization**  
Ishrat Jahan Eliza, **Md Dilshadur Rahman**  
*Accessible Data Visualization Workshop at IEEE VIS*, 2026  
Accepted; to appear · [arXiv:2607.25021](https://arxiv.org/abs/2607.25021)
- C3      **A Case Study in Accessible Redesign of a Wastewater Dashboard**  
Tingying He, Jake Wagoner, Md Rahat-uz-Zaman, **Md Dilshadur Rahman**, Willy Ray, George G. Vega Yon, Matthew Samore, Alexander Lex, Paul Rosen  
*Accessible Data Visualization Workshop at IEEE VIS*, 2026  
Accepted; to appear · [arXiv:2609.25273](https://arxiv.org/abs/2609.25273)

- C4      **FocalLens: Visualizing Narratives through Focalization**  
 S. M. Raihanul Alam, **Md Dilshadur Rahman**, Md Naimul Hoque  
*arXiv preprint*, 2026  
[arXiv:2604.14456](#) · [Website](#)
- C5      **AnnoGram: An Annotative Grammar of Graphics Extension**  
**Md Dilshadur Rahman\***, Md Rahat-uz-Zaman\*, Andrew McNutt, Paul Rosen  
*IEEE Visualization and Visual Analytics (IEEE VIS)*, 2025 · Short Paper  
 \* Co-first authors · [arXiv:2507.04236](#) · [Project site](#)
- C6      **Seeing is Believing: The Role of Scatterplots in Recommender System Trust and Decision-Making**  
 Bhavana Doppalapudi, **Md Dilshadur Rahman**, Paul Rosen  
*International Symposium on Visual Computing (ISVC)*, 2024  
[doi:10.1007/978-3-031-77392-1\\_32](#)
- C7      **Striking the Right Balance: Systematic Assessment of Evaluation Method Distribution Across Contribution Types**  
 Feng Lin, Arran Zeyu Wang, **Md Dilshadur Rahman**, Danielle Szafir, Ghulam Jilani Quadri  
*IEEE BELIV (co-located with IEEE VIS)*, 2024  
[doi:10.1109/BELIV64461.2024.00020](#)
- C8      **EduVis: 2nd IEEE VIS Workshop on Visualization Education, Literacy, and Activities**  
 Fateme Rajabiyazdi, Mandy Keck, Christina Stoiber, Jonathan Roberts, Hari Subramonyam, Lily Ge, Magdalena Boucher, Benjamin Bach, Lonni Besancon, Mathis Brossier, Anders Ynnerman, Konrad Schonborn, Alon Friedman, Bo Pei, Ly Dinh, Kevin Hawley, Julia Woodward, Paul Rosen, **Md Dilshadur Rahman**, Yan Chen  
*IEEE VIS*, 2024  
[EduVis Workshop 2024](#)
- C9      **Enhancing Student Feedback Using Predictive Models in Visual Literacy Courses**  
 Alon Friedman, Kevin Hawley, Paul Rosen, **Md Dilshadur Rahman**  
*IEEE Engineering Education Conference (IEEE EDUCON)*, 2024  
[doi:10.1109/EDUCON60312.2024.10578647](#)
- C10      **Exploring Annotation Strategies in Professional Visualizations: Insights from Prominent US News Portals**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Paul Rosen  
*IEEE VIS Workshop on Visualization for Communication (VisComm)*, 2023  
[doi:10.31219/osf.io/fd8zj](#) · [VisComm Workshop 2023](#) · [Project site](#)
- C11      **A Qualitative Evaluation and Taxonomy of Student Annotations on Bar Charts**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Paul Rosen  
*IEEE VIS Workshop on Visualization for Communication (VisComm)*, 2022  
[doi:10.31219/osf.io/e5vfy](#) · [VisComm Workshop 2022](#)

- C12      **A Framework for Implementing Join Operation Between Multiple MOLAPs**  
**Md Dilshadur Rahman**, MAA Hossain, KMA Hasan  
IEEE International Conference on Electrical, Computer and Communication Engineering (IEEE ECCE), 2019  
[doi:10.1109/ECACE.2019.8679373](https://doi.org/10.1109/ECACE.2019.8679373)
- Posters
- P1      **How Do Professionals Use Annotations in Visualizations?**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Paul Rosen  
IEEE VIS Poster Proceedings, 2024  
[IEEE VIS 2024 Poster](#) · [Project site](#)
- P2      **Seeing is Believing: The Role Recommender System Accuracy Plays on Trust in Scatterplots**  
Bhavana Doppalapudi, **Md Dilshadur Rahman**, Paul Rosen  
IEEE VIS Poster Proceedings, 2024  
[IEEE VIS 2024 Poster](#)
- P3      **A Qualitative Evaluation and Taxonomy of Bar Chart Annotations**  
**Md Dilshadur Rahman**, Ghulam Jilani Quadri, Paul Rosen  
IEEE VIS Poster Proceedings, 2022  
[IEEE VIS 2022 Poster](#) · [Project site](#)
- Under review and in preparation
- R1      **Interfaces for Judgment: Scaffolding Evaluative Reasoning in Interaction**  
Alon Friedman, **Md Dilshadur Rahman**, Ly Dinh, Julia Woodward, Bo Pei, Paul Rosen  
Under Review in *ACM Transactions on Computer-Human Interaction*, 2026
- R2      **AnnoBench: A Benchmark for Visualization Annotation Generation**  
Md Rahat-uz-Zaman\*, **Md Dilshadur Rahman**\*, Andrew McNutt, Paul Rosen  
Under Review, 2026  
\* Co-first authors · [Website](#)
- R3      **Shaping Evaluative Analysis Through Data Visualization Design: A Study of Visual Nudges**  
Alon Friedman, **Md Dilshadur Rahman**, Paul Rosen  
Under Review, 2026
- R4      **Influence of Visualizing Class Balance Information on Recommendations' Trust and Decision-Making**  
Bhavana Doppalapudi, **Md Dilshadur Rahman**, Paul Rosen  
In preparation, 2026

## HONORS & AWARDS

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|         |                                                                                                                  |
|---------|------------------------------------------------------------------------------------------------------------------|
| 2026    | Selected as a Future Leader of AI, ACM AI Leadership Summit, with NSF travel support                             |
| 2026    | Kahlert Impact Prize for Research & Academic Service Excellence, Kahlert School of Computing, University of Utah |
| 2026    | Special recognition for outstanding reviews (Posters), ACM CHI                                                   |
| 2025    | Special recognition for outstanding reviews (Late Breaking Works), ACM CHI                                       |
| 2023    | Doctoral Colloquium Fellowship, IEEE VIS                                                                         |
| 2023    | ~\$4,000 in NSF travel funding, Doctoral Colloquium at IEEE VIS                                                  |
| 2022    | ~\$500 travel award from Associated Students of the University of Utah, IEEE VIS                                 |
| 2021    | ~\$1,500 in NSF travel funding, Topological Data Visualization Workshop, University of Iowa                      |
| 2016–17 | University Dean's Award, Khulna University of Engineering and Technology                                         |
| 2015–16 | University Dean's Award, Khulna University of Engineering and Technology                                         |

## ACADEMIC SERVICE & LEADERSHIP

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### *Conference & Workshop Organization*

|            |                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------|
| 2026, 2025 | Technical Program Committee Member, IEEE Global Engineering Education Conference (IEEE EDUCON)             |
| 2026, 2025 | Program Committee Member (Short Papers), IEEE Visualization and Visual Analytics (IEEE VIS)                |
| 2025       | Co-Organizer, IEEE VIS Workshop on Visualization for Communication (VisComm), IEEE VIS                     |
| 2025       | Committee Member, Talk Submissions, Outlier Conference                                                     |
| 2025       | Committee Member (Judge), Visual Data Storytelling Contest, IEEE PacificVis                                |
| 2024       | Co-Organizer, IEEE VIS Workshop on Visualization Education, Literacy, and Activities (EduVis)              |
| 2024       | Student Volunteer, IEEE VIS                                                                                |
| 2013       | Student Volunteer, International Conference of Electrical, Information, and Communication Technology, KUET |

## Peer Review

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|--------------------------------------------------|----------------------------------------------|
| ACM CHI 2026, 2025                               | Int'l Journal of Human-Computer Studies 2026 |
| ACM IUI (Posters) 2026                           | IEEE PacificVis 2025                         |
| IEEE VIS 2026, 2025                              | ACM CUI 2025                                 |
| ACM Transactions on Computing Education 2026     | IEEE EDUCON 2026, 2025                       |
| Communications of the ACM 2026                   | OzCHI 2025, 2024                             |
| ACM DIS 2025                                     | IEEE TVCG 2026, 2024                         |
| IEEE/EuroGraphics EuroVis 2025                   | ACM CSCW 2024                                |
| Int'l Journal of Human-Computer Interaction 2025 | IEEE EduVis 2024                             |
|                                                  | IEEE ECCE 2024                               |

## Other Volunteering

|            |                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|
| 2024, 2023 | Student Volunteer, Prospective CS Graduate Student Visit, University of Utah                  |
| 2020       | Student Volunteer, Hack Arizona                                                               |
| 2020       | Student Volunteer, Prospective CS Graduate Student Visit, University of Arizona               |
| 2014–2016  | Student Coordinator, National High School Programming Contest; led the student volunteer team |
| 2016       | Organizing Committee Member, Intra-Department Idea Contest, KUET                              |
| 2016, 2015 | Organizing Committee Member, Intra-Department Programming Contest, KUET                       |

## TALKS

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|      |                                                                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026 | <b>Annotations in Visualizations</b><br>INVITED LECTURE Furman University Computer Science, Greenville, South Carolina, USA                             |
| 2026 | <b>Towards AI-enabled Visualization Authoring and Communication</b><br>SUMMIT TALK ACM AI Leadership Summit, Atlanta, Georgia, USA                      |
| 2026 | <b>Designing Annotations in Visualization: Considerations from Visualization Practitioners and Educators</b><br>CONFERENCE TALK EuroVis, Nottingham, UK |
| 2026 | <b>Design Space and Tooling for Annotations in Visualizations</b><br>INVITED TALK Harvard Medical School, Boston, Massachusetts, USA                    |
| 2026 | <b>Design Space and Tooling for Annotations in Visualizations</b><br>INVITED TALK Oak Ridge National Laboratory, Tennessee, USA                         |
| 2024 | <b>A Qualitative Analysis of Common Practices in Annotations: A Taxonomy and Design Space</b><br>CONFERENCE TALK IEEE VIS, Virtual                      |

- 2024      **A Qualitative Analysis of Common Practices in Annotations: A Taxonomy and Design Space**  
SEMINAR TALK    *Visualization Seminar, SCI Institute, University of Utah, USA*
- 2023      **Understanding the Design Space of Annotations in Visualizations**  
INVITED TALK    *Doctoral Colloquium, IEEE VIS, Melbourne, Australia*
- 2023      **How Do People Comprehend Annotations in Visualizations?**  
CONFERENCE TALK    *Vis X Vision Workshop, IEEE VIS, Melbourne, Australia*
- 2023      **Exploring Annotation Strategies in Professional Visualizations: Insights from Prominent US News Portals**  
CONFERENCE TALK    *VisComm Workshop, IEEE VIS, Melbourne, Australia*
- 2022      **A Qualitative Evaluation and Taxonomy of Student Annotations on Bar Charts**  
CONFERENCE TALK    *VisComm Workshop, IEEE VIS, Oklahoma City, USA*
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Last updated October 2026 · The latest version is at [dilshadur.com/cv](https://dilshadur.com/cv)