

Bishwamittra Ghosh

Employment

Since 06.23 **Scientist**, *Institute of High Performance Computing (IHPC), A*STAR*, Singapore.

Education

- 01.18–08.23 **Ph.D. in Computer Science**, *National University of Singapore (NUS)*, Singapore.
(Expected) Advisor: Dr. Kuldeep S. Meel
Thesis: Interpretability and Fairness in Machine Learning: A Formal Methods Approach
- 02.13–09.17 **BSc. in Computer Science and Engineering**, *Bangladesh University of Engineering and Technology (BUET)*, Bangladesh, CGPA: 3.83 out of 4 (with Honours).
Advisor: Dr. Mohammed Eunus Ali
Thesis: The Flexible Socio Spatial Group Queries
- 2012 **Higher Secondary Certificate**, *Satkhira Government College*, Satkhira, Bangladesh.
- 2010 **Secondary School Certificate**, *Satkhira Government High School*, Satkhira, Bangladesh.

Research Interests

Fairness and explainability in machine learning

Publications

Conference Papers

- FACCT-23 “How Biased are Your Features?”: Computing Fairness Influence Functions with Global Sensitivity Analysis
Bishwamittra Ghosh, Debabrota Basu, Kuldeep S. Meel
- VLDB-23 Neighborhood-based Hypergraph Core Decomposition
Naheed Anjum Arafat, Arijit Khan, Arpit Kumar Rai, Bishwamittra Ghosh
- AAAI-22 Algorithmic Fairness Verification with Graphical Models
Bishwamittra Ghosh, Debabrota Basu, Kuldeep S. Meel
- AAAI-21 Justicia: A Stochastic SAT Approach to Formally Verify Fairness
Bishwamittra Ghosh, Debabrota Basu, Kuldeep S. Meel
- AAAI-20 A MaxSAT-based Framework for Group Testing
Lorenzo Ciampiconi, Bishwamittra Ghosh, Jonathan Scarlett, Kuldeep S. Meel
- ECAI-20 Classification Rules in Relaxed Logical Form
Bishwamittra Ghosh, Dmitry Malioutov, Kuldeep S. Meel
- AIES-19 IMLI: An Incremental Framework for MaxSAT-Based Learning of Interpretable Classification Rules
Bishwamittra Ghosh, Kuldeep S. Meel
- VLDB-18 The Flexible Socio Spatial Group Queries
Bishwamittra Ghosh, Mohammed Eunus Ali, Farhana M. Choudhury, Sajid Hasan Apon, Timos Sellis, Jianxin Li

Journal Papers

- JAIR-22 Efficient Learning of Interpretable Classification Rules
Bishwamittra Ghosh, Dmitry Malioutov, Kuldeep S. Meel

TSAS-21 Social-Spatial Group Queries with Keywords
Sajid Hasan Apon, Mohammed Eunus Ali, [Bishwamittra Ghosh](#), Timos Sellis

Professional Experiences

Tutorials

IJCAI-23 Auditing Bias of Machine Learning Algorithms: Tools and Overview

Talks

Conferences FAccT (23), AAAI (22, 21, 20), ECAI (20), CP (19), VLDB (19), IJCAI (19), AIES (19)

Academic Reviewer

NeurIPS (23, 22, 21), ICML (23), AAAI (23, 22), AIES (22), CAV (23), TKDE (20)

Research Visit

03.23–05.23 Max Planck Institute For Software Systems, Saarbrücken, Germany
11.21–02.22 INRIA, Lille-Nord, France
06.21–08.21 Goldman Sachs, Singapore
03.20–06.20 Max Planck Institute For Software Systems, Kaiserslautern, Germany

Graduate Assistant (NUS)

2018–2021 CS2030 Programming Methodology II
2020 CS3243: Introduction to Artificial Intelligence

Lecturer

10.17–01.18 Department of CSE, United International University (UIU), Bangladesh

Awards

2018–2023 NUS Research Scholarship, Singapore
2021 Moblilex Scholarship, Université de Lille, France
2013–2017 University Deans List Award, BUET, Bangladesh

References

- **Kuldeep S. Meel**
Associate Professor
Department of Computer Science
University of Toronto, Canada
Email: meel+recos@cs.toronto.edu
- **Krishna P. Gummadi**
Faculty (Scientific Director)
Head, Networked Systems Research Group
MPI-SWS, Germany
Email: gummadi@mpi-sws.org
- **Arijit Khan**
Associate Professor
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Aalborg University, Denmark
Email: arjitk@cs.aau.dk
- **Debabrota Basu**
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