Bishwamittra Ghosh

Scientist
IHPC, A*STAR, Singapore
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dblp, scholar

Employment

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

Education

01.18–08.23 (Expected)   **Ph.D. in Computer Science**, *National University of Singapore (NUS)*, Singapore.
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
<u>Bishwamittra Ghosh</u>, Debabrota Basu, Kuldeep S. Meel

VLDB-23   Neighborhood-based Hypergraph Core Decomposition
Naheed Anjum Arafat, Arijit Khan, Arpit Kumar Rai, <u>Bishwamittra Ghosh</u>

AAAI-22   Algorithmic Fairness Verification with Graphical Models
<u>Bishwamittra Ghosh</u>, Debabrota Basu, Kuldeep S. Meel

AAAI-21   Justicia: A Stochastic SAT Approach to Formally Verify Fairness
<u>Bishwamittra Ghosh</u>, Debabrota Basu, Kuldeep S. Meel

AAAI-20   A MaxSAT-based Framework for Group Testing
Lorenzo Ciampiconi, <u>Bishwamittra Ghosh</u>, Jonathan Scarlett, Kuldeep S. Meel

ECAI-20   Classification Rules in Relaxed Logical Form
<u>Bishwamittra Ghosh</u>, Dmitry Malioutov, Kuldeep S. Meel

AIES-19   IMLI: An Incremental Framework for MaxSAT-Based Learning of Interpretable Classification Rules
<u>Bishwamittra Ghosh</u>, Kuldeep S. Meel

VLDB-18   The Flexible Socio Spatial Group Queries
<u>Bishwamittra Ghosh</u>, Mohammed Eunus Ali, Farhana M. Choudhury, Sajid Hasan Apon, Timos Sellis, Jianxin Li

Journal Papers

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

TSAS-21   Social-Spatial Group Queries with Keywords
Sajid Hasan Apon, Mohammed Eunus Ali, <u>Bishwamittra Ghosh</u>, Timos Sellis

Professional Experiences

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

Conference Talks
FAccT-23, AAAI-22, AAAI-21, AAAI-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, Saarbrucken, 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

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

Awards
2018–2023   NUS Research Scholarship, Singapore
2021   Moblilex Scholarship, University of Lille, France
2013–2017   University Deans List Award, BUET

References

○ **Kuldeep S. Meel**
Associate Professor
Department of Computer Science
University of Toronto, Canada
Email: meel+recos@cs.toronto.edu

○ **Arijit Khan**
Associate Professor
Department of Computer Science
Aalborg University, Denmark
Email: arijitk@cs.aau.dk

○ **Krishna P. Gummadi**
Faculty (Scientific Director)
Head, Networked Systems Research Group
MPI-SWS, Germany
Email: gummadi@mpi-sws.org

○ **Debabrota Basu**
Faculty (equivalent of Assoc. Prof.)
Inria at Université de Lille and CNRS, France
Email: debabrota.basu@inria.fr