Bishwamittra Ghosh

Scientist
*IHPC, A*STAR, Singapore*
✉ *bghosh@u.nus.edu*
🖥 *bishwamittra.github.io*
dblp, scholar

Employment

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

Education

01.18–09.23	**PhD 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

Trustworthy machine learning; Fairness and explainability of 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, <u>Bishwamittra Ghosh</u>, 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, ICML, AAAI, TNNLS, TMI, AIES, CAV, TKDE

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
2020	CS3243: Introduction to Artificial Intelligence

Lecturer

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

Awards

2021	Moblilex Scholarship, Université de Lille, France
2018–2023	NUS Research Scholarship, Singapore
2013-2017	University Deans List, BUET, Bangladesh
2011, 2012	National Math Olympiad winner, Bangladesh
2012	National Chemistry Olympiad winner, Bangladesh

References

- **Kuldeep S. Meel**
  Associate Professor
  Department of Computer Science
  University of Toronto, Canada
  Email: meel+recos@comp.nus.edu

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

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

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