Bishwamittra Ghosh

Personal Details

Contact Address: 205 Bukit Batok Street 21, #02-46, Singapore, 650205
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Date of Birth: 28 November 1995
Website: https://bishwamittra.github.io

Research Interest

My research interest is in deploying machine learning in high-stake decision-making. I apply formal methods to verify and improve fairness, interpretability, and explainability in machine learning.

Education

National University of Singapore, Singapore	2018 - Present
Ph.D. candidate, School of Computing	
Adviser: Dr. Kuldeep S. Meel	
Bangladesh University of Engineering and Technology, Bangladesh	2013 - 2017
BSc. with Honors degree in Computer Science and Engineering	
Adviser: Dr. Mohammed Eunus Ali	

Publications[1]

Conference Papers

6. Algorithmic Fairness Verification with Graphical Models
   Bishwamittra Ghosh, Debabrota Basu, Kuldeep S. Meel
   Proceedings of AAAI, 2022

5. Justicia: A Stochastic SAT Approach to Formally Verify Fairness
   Bishwamittra Ghosh, Debabrota Basu, Kuldeep S. Meel
   Proceedings of AAAI, 2021

4. A MaxSAT-based Framework for Group Testing
   Lorenzo Ciampiconi, **Bishwamittra Ghosh**, Jonathan Scarlett, Kuldeep S. Meel
   Proceedings of AAAI, 2020

3. Classification Rules in Relaxed Logical Form
   Bishwamittra Ghosh, Dmitry Malioutov, Kuldeep S. Meel
   Proceedings of ECAI, 2020

2. IMLI: An Incremental Framework for MaxSAT-Based Learning of Interpretable Classification Rules
   Bishwamittra Ghosh, Kuldeep S. Meel
   Proceedings of AIES, 2019

1. The Flexible Socio Spatial Group Queries
   Bishwamittra Ghosh, Mohammed Eunus Ali, Farhana M. Choudhury, Sajid Hasan Apon, Timos Sellis, Jianxin Li
   Proceedings of the VLDB Endowment (PVLDB), 2018

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[1]sorted by publication year

Journal Papers

2. Efficient Learning of Interpretable Classification Rules
   Bishwamittra Ghosh, Dmitry Malioutov, Kuldeep S. Meel
   Proceedings of JAIR, 2022

1. Social-Spatial Group Queries with Keywords
   Sajid Hasan Apon, Mohammed Eunus Ali, **Bishwamittra Ghosh**, Timos Sellis
   ACM Transactions on Spatial Algorithms and Systems (TSAS), 2021

Professional Experiences

Conference Talks
AAAI-2022, AAAI-2021, AAAI-2020, ECAI-2020, CP-2019, VLDB-2019, IJCAI-2019, AIES-2019

Academic Reviewer
NeurIPS-2022, 2021, AAAI-2022, AIES-2022,

Research Internship

- INRIA, Lille-Nord, France   2021
- Goldman Sachs, Singapore   2021
- Max Planck Institute For Software Systems, Kaiserslautern, Germany   2020

Graduate Assistant
School of Computing, National University of Singapore   2018 - 2021

Lecturer
Department of Computer Science and Engineering, United International University (UIU), Bangladesh   2017

Technical Skills

Advanced: Python, TensorFlow, Solvers (SAT, MaxSAT, SSAT, SMT, ILP), LaTeX
Intermediate: C/C++, Java

Reference

Kuldeep S. Meel
Sung Kah Kay Assistant Professor
School of Computing, National University of Singapore, Singapore
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Daniel Neider
Professor
Carl von Ossietzky Universität Oldenburg, Germany
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Debabrota Basu
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Scool, Inria, Lille-Nord, France
Email: debabrota.basu@inria.fr