

Xin Du

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WORK EXPERIENCE

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|--|------------------|
| POSTDOC Research Associate, The University of Edinburgh | 2021-2023 |
| <ul style="list-style-type: none">Trustworthy Autonomous Systems. | |
| POSTDOC Fellowship, Eindhoven University of Technology | 2020-2021 |
| <ul style="list-style-type: none">Fairness, causality, and exceptional model mining. | |
| PHD RESEARCH, Eindhoven University of Technology | 2017-2020 |
| <ul style="list-style-type: none">Fairness in Network Representation Learning.Causal Inference.Exceptional Model Mining on multi-modal data. | |

ACADEMIC ACTIVITIES

- (Senior) Program Committee Member**, ECML-PKDD 2020-2024, IJCAI 2021-2024, AAAI 2021-2025, UAI 2021-2024, AISTATS 2022-2025, IDA 2023, ICLR 2023.
- Journal Reviewer**, International Journal of Artificial Intelligence in Education (IJAIED), Data Mining and Knowledge Discovery (DAMI).
- Proceeding Chair**, ECML-PKDD 2019.
- Volunteer**, International Symposium on Intelligent Data Analysis (IDA), 2018.
- Volunteer**, The Annual Machine Learning Conference of The Benelux (Benelearn), 2017.

EDUCATION

Ph.D. Computer Science, Eindhoven University of Technology, September 2020.

Thesis: "The Uncertainty in Exceptional Model Mining",

Advisor: Mykola Pechenizkiy & Wouter Duivesteijn,

<https://research.tue.nl/en/publications/the-uncertainty-in-exceptional-model-mining>

M.A. Geographic Information System, Wuhan University 2015.

B.S. Geographic Information System, Yunnan University 2010.

Referees

Prof. Mykola Pechenizkiy, m.pechenizkiy@tue.nl, data mining group, Eindhoven University of Technology

Dr. Wouter Duivesteijn, w.duivesteijn@tue.nl, data mining group, Eindhoven University of Technology

Awards

- 2020 **Student Travel Award** New York, U.S.A
Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)
- 2014 **Software Copyright: 2014SR036739** Wuhan University
Multi-scale map data matching software(GeoMatching)
- 2014 **Software Copyright: 2014SR036893** Wuhan University
POI visualization based on ubiquitous space and mapping system(POIViewer)
- 2014 **Software Copyright: 2014SR025346** Wuhan University
Ocean survey data management and 3D visualization information system.
- 2013 **Patent: CN 103473420 A**
Automatic positioning method of statistical graph in zonal statistic map

Publications

[1] X. Du, Y. Pei, W. Duivesteijn, M. Pechenizkiy,
Exceptional Spatio-Temporal Behavior Mining through Bayesian Non-Parametric Modeling.
Data Mining and Knowledge Discovery (ECML-PKDD Journal Track), 2020, 34, 1267-1290,
<https://link.springer.com/article/10.1007/s10618-020-00674-z>

[2] X. Du, Y. Pei, W. Duivesteijn, M. Pechenizkiy,
Fairness in Network Representation by Latent Structural Heterogeneity in Observational Data. AAAI Conference on Artificial Intelligence (AAAI), 2020, (Vol. 34, No. 04, pp. 3809-3816),
<https://ojs.aaai.org/index.php/AAAI/article/view/5792>

[3] X. Du, L. Sun, W. Duivesteijn, A. Nikolaev and M. Pechenizkiy,
Adversarial Representation Learning for Causal Effect Inference with Observational Data. Data Mining and Knowledge Discovery, 2021, 35(4), 1713-1738,
<https://link.springer.com/article/10.1007/s10618-021-00759-3>

[4] X. Du, W. Duivesteijn, M. Klabbers, M. Pechenizkiy,

ELBA: Exceptional Learning Behavior Analysis.

Proceedings of the Eleventh International Conference on Educational Data Mining (EDM), 2018, <https://eric.ed.gov/?id=ED593224>

[5] Y. Pei, X. Du, J. Zhang, G. Fletcher, M. Pechenizkiy,

struc2gauss: Structure Preserving Network Embedding via Gaussian Embedding.

Data Mining and Knowledge Discovery, 2020,

<https://link.springer.com/article/10.1007/s10618-020-00684-x>

[6] X. Du, B. Legastelois, B. Ganesh, A. Rajan, H. Chockler, V. Belle, S. Anderson, S. Ramamoorthy,

Vision Checklist: Testable Error Analysis of Image Models to Help System

Designers Interrogate Model Capabilities. Work-in-progress, 2022,

<https://arxiv.org/abs/2201.11674>

[7] X. Du, S. Ramamoorthy, W. Duivesteijn, J. Tian, M. Pechenizkiy,

Beyond Discriminant Patterns: On the Robustness of Decision Rule Ensembles. Work-in-

progress, 2021, <https://arxiv.org/abs/2109.10432>

[8] Y. Wang, V. Menkovski, H. Wang, X. Du, M. Pechenizkiy,

Causal Discovery from Incomplete Data: A Deep Learning Approach. arxiv preprint, 2020,

<https://arxiv.org/abs/2001.05343>

[9] Anthony L. Corso, Sydney M. Katz, Craig Innes, Xin Du, Subramanian Ramamoorthy, Mykel J. Kochenderfer,

Risk-Driven Design of Perception Systems. The 36th Conference on Neural Information Processing Systems, 2022,

<https://www.research.ed.ac.uk/en/publications/risk-driven-design-of-perception-systems>