

André Artelt



PERSONAL DATA

PLACE AND YEAR OF BIRTH: Bielefeld, Germany | 1994
EMAIL: aartelt@techfak.uni-bielefeld.de
WEBSITE: <https://andreartelt.github.io>
LANGUAGES: German (native), English (fluent)

WORKING EXPERIENCE

2024 - PRESENT	<i>Post-doctoral researcher</i> at BIELEFELD UNIVERSITY, GERMANY Machine Learning Group at Faculty of Technology. Research on trustworthy AI and supervision of one student research assistant.
2019 - 2024	<i>PhD researcher</i> at BIELEFELD UNIVERSITY, GERMANY Machine Learning Group at Faculty of Technology. Research on explainable AI.
2014 - 2019	<i>Teaching assistant</i> at BIELEFELD UNIVERSITY, GERMANY Teaching assistant (TA) for different computer science courses: Introduction to Machine Learning, Applied Optimization, Algorithms in Computer Science, Algorithms and Data structures, Introduction to OOP in Java.
2013 - 2019	<i>Software Developer (part time)</i> at SCHÜCO DIGITAL GMBH (SCHÜCO INTERNATIONAL KG), Bielefeld, Germany Software development and information retrieval. Used technology: C#, .NET, C++, (no)SQL, JavaScript and Python.

AFFILIATIONS

2022 - PRESENT	<i>Visiting Researcher</i> at UNIVERSITY OF CYPRUS, CYPRUS Department of Electrical and Computer Engineering / KIOS Research and Innovation Center of Excellence.
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EDUCATION

2019 - 2024	<i>PhD in Machine Learning / Dr. rer. nat.</i> , BIELEFELD UNIVERSITY PhD thesis: “Contrasting Explanations in Machine Learning Efficiency, Robustness & Applications” (<i>cum laude</i>)
2017 - 2019	<i>Intelligent Systems / Master of Science</i> , BIELEFELD UNIVERSITY
2013 - 2017	<i>Cognitive Informatics / Bachelor of Science</i> , BIELEFELD UNIVERSITY

PUBLICATION RECORD

- H-INDEX: 14
- I10-INDEX: 23
- NUMBER OF CITATIONS: 699

Date: 03.11.2025 (h-Index and number of citations according to Google Scholar)

AWARDS

2024	AI for CI @ ICJAI 2024, Best Paper Award
2019	<i>Outstanding TA award</i> (Course: INTRODUCTION TO MACHINE LEARNING)
2018	<i>Outstanding TA award</i> (Course: INTRODUCTION TO MACHINE LEARNING)
2015	<i>1. Price group project</i> (Project seminar on software engineering)

RESEARCH VISITS

NOVEMBER 2024	<i>Imperial College London – Department of Computing</i> Host: Francesca Toni
OCTOBER - DECEMBER 2023	<i>KIOS - Research and Innovation Center of Excellence</i> <i>University of Cyprus</i> Host: Marios Polycarpou
NOVEMBER 2022	<i>KIOS - Research and Innovation Center of Excellence</i> <i>University of Cyprus</i> Host: Marios Polycarpou

TALKS & PRESENTATIONS

- Invited talk on *Explainable AI for Event Diagnosis in Smart Water Systems* at WDSA Graduate Webinar, 2025
- Invited talk on *Counterfactual Explanations for Analyzing AI Systems* at Europol XAI Seminar 2025.
- Poster on *(X)AI for Water Distribution Networks* at AAAI 2025 Bridge on Explainable AI in Energy and Critical Infrastructure Systems.
- Invited talk on *"Who Dunit?" – Tracing Explanations back to Training Samples* at XAI Seminars @ Imperial College London, 2024.
- Talk & Poster on *Utilizing XAI for Increasing Customers' Repurchase Intentions* at AMLD EPFL 2024.
- Talk on *Vertrauenswürdige KI* at Citizen Science workshop 2023 in Tutzingen, Germany.
- Poster on *Explainable AI for Intelligent Machines in Everyday Life* at Herrenhausen Conference on "AI and the Future of Societies", 2022.
- Talk on *"What if ..." - Counterfactuals for Explaining Machine Learning Models* at Heinz-Nixdorf Symposium 2022.
- Talk on *Maschinelles Lernen (ML)* at Citizen Science workshop 2020 in Duisburg, Germany.
- Talk & Poster on *On Counterfactual Explanations of ML Models* at EEML 2020.

ORGANIZING & COMMUNITY ACTIVITIES

Dagstuhl 2026	<i>Explainable AI in Energy and Critical Infrastructure Systems</i> (Dagstuhl Seminar) A. Artelt , K. Baker, B. Hammer, F. Leofante
WDSA CCWI 2026	<i>Battle of the Water Futures</i> (Competition) D Zanutto, J. Brandt, S. Vrachimis, P. Samartzis, D. Eliades, C. Michalopoulos, L. Tsiami, A. Artelt , S. Alvisi, D.Savic, M. Polycarpou, B. Hammer, P. Koundouri
IJCAI 2025	<i>1st AI for Drinking Water Chlorination Challenge</i> (Competition) A. Artelt , L. Hermes, J. Strother, B. Hammer, S. Vrachimis, D. Eliades, M. Kyriakou, M. Polycarpou, S. Paraskevopoulos, S. Vrochidis, R. Taormina, D. Savic, P. Koundouri
AAAI 2025	<i>(Really) Using Counterfactuals to Explain AI Systems: Fundamentals, Methods, & User Studies for XAI</i> (Tutorial) U. Kuhl, A. Artelt , M. Keane
AAAI 2025	<i>Explainable AI in Energy and Critical Infrastructure Systems</i> (Bridge) A. Artelt , D. Eliades, A. Korre, F. Leofante, T. Miller, F. Toni
IJCAI 2024	<i>All You Ever Need to Know About Counterfactual Explanations: Fundamentals, Methods, & User Studies for XAI</i> (Tutorial) A. Artelt , U. Kuhl, M. Keane
WDSA CCWI 2024	<i>Introduction to the EPANET-Python Toolkit (EPyT) for Smart Water Network Simulations</i> (Tutorial) D. Eliades, S. Vrachimis, M. Kyriakou, A. Artelt
IEEE WCCI 2024	<i>Machine Learning in Critical Infrastructure</i> (Special Session) A. Artelt , C. Alippi, M. Polycarpou, B. Hammer

REVIEWER ACTIVITIES

Numerous reviews for several conferences and journals:

- CONFERENCES: *IJCAI*, *ICML*, *ICLR*, *NeurIPS*, *AISTATS*, *ECML*, *xAI*, *ECAI*, *AAMAS*, *IEEE IJCNN*, *IEEE SSCI*, *IEEE CAI*, *HICSS*, *ICANN*, *ESANN*, *EXPLAINABILITY*, *ICNCIT*
- JOURNALS: *ACM Computing Surveys*, *Transactions on Machine Learning Research*, *Transactions on Pattern Analysis and Machine Intelligence*, *IEEE Transactions on Neural Networks and Learning Systems*, *Proceedings of the IEEE*, *Information Fusion*, *Pattern Analysis and Applications*, *Machine Learning*, *Information Systems Frontiers*, *European Journal of Operational Research*, *Expert Systems With Applications*, *Cognitive Computation*, *Engineering Applications of Artificial Intelligence*, *Data Mining and Knowledge Discovery*, *Computers & Graphics*, *Data Science Analytics*, *Applied Soft Computing Journal*, *Artificial Intelligence Review*, *Neural Processing Letters*, *Computers & Industrial Engineering*, *SoftwareX*, *Scientific Reports*, *PeerJ*, *Automated Software Engineering*, *Frontiers in Energy Research (Sustainable Energy Systems and Policies)*, *Journal of Decision Systems*

Senior roles

- Conflict of Interest chair @ *IEEE IJCNN 2026*
- Area chair: *IEEE IJCNN*

TEACHING EXPERIENCE

Supervision

- NUMBER OF BACHELOR THESES: 13
- NUMBER OF MASTER PROJECTS: 4
- NUMBER OF MASTER THESES: 4

Course Instructor

SUMMER 2025 *Machine Learning for Water Distribution Networks*

Teaching Assistant

WINTER 2018/19 *Introduction to Machine Learning*[¶]; *Applied Optimization*
WINTER 2017/18 *Introduction to Machine Learning*[¶]
SUMMER 2018 *Algorithms in Computer Science*¹
SUMMER 2017 *Foundations of Artificial Cognition*¹
WINTER 2016/17 *Introduction to Machine Learning*
SUMMER 2016 *Foundations of Artificial Cognition*¹
WINTER 2015/16 *Algorithms and Data structures & Functional Programming in Haskell*¹
WINTER 2014/15 *Algorithms and Data structures & Functional Programming in Haskell*¹
SUMMER 2015 *Object Orientated Programming in Java*¹

¹ Course was taught in German.

[¶] Outstanding teaching assistant award.

Organizer of Exercises

SUMMER 2023 *Algorithms in Computer Science*
WINTER 2021/22 *Applied Optimization*
SUMMER 2021 *Algorithms in Computer Science*
WINTER 2020/21 *Applied Optimization*
SUMMER 2020 *Algorithms in Computer Science*
WINTER 2019/20 *Introduction to Machine Learning*
SUMMER 2019 *Algorithms in Computer Science*

Authored Lecture Notes

B. Paaßen, **A. Artelt**, and B. Hammer, *Lecture Notes on Applied Optimization*, Faculty of Technology, Bielefeld University: 2019. Available at <https://pub.uni-bielefeld.de/record/2935200>

A. Artelt, *Introduction to Machine Learning - Supplementary notes*, Faculty of Technology, Bielefeld University: 2019. Available at <https://pub.uni-bielefeld.de/record/2936408>

COMPLETE LIST OF PUBLICATIONS

Books (chapters)

A. Artelt, M. Keane, U. Kuhl, *Counterfactual Explanations in AI – Cognitive Fundamentals, Computational Aspects, and Human-centered Evaluations*, Springer Book, December 2026 (tentative)

A. Artelt, *Daten aus informatischer Sicht* (chapter) in Geminn & Johannes, "Europäisches Datenrecht", 2025 – English version available as Geminn & Johannes, "EU Data Law", 2026

Journal Publications

F. Leofante, **A. Artelt**, D. Eliades, A. Korre, F. Toni, T. Miller *Explainable AI, Energy and Critical Infrastructure Systems*, AI Magazine, 2025. doi: 10.1002/aaai.70033

L. Hermes*, **A. Artelt***, S. G. Vrachimis, M. M. Polycarpou, and B. Hammer *A Benchmark for Physics-informed Machine Learning of Chlorine States in Water Distribution Networks*, SN Computer Science, 2025. doi:10.1007/s42979-025-04008-y

* Shared first authorship.

A. Artelt, M. S. Kyriakou, S. G. Vrachimis, D. G. Eliades, B. Hammer, and M. M. Polycarpou, *EPyT-Flow: A Toolkit for Generating Water Distribution Network Data*, Journal of Open Source Software, vol. 9, no. 103. The Open Journal, p. 7104, Nov. 12, 2024. doi: 10.21105/joss.07104.

A. Artelt and A. Gregoriades, *Supporting organizational decisions on How to improve customer repurchase using multi-instance counterfactual explanations*, Decision Support Systems, vol. 182. Elsevier BV, p. 114249, Jul. 2024. doi: 10.1016/j.dss.2024.114249

A. Artelt, R. Visser, and B. Hammer, *'I do not know! but why?' — Local model-agnostic example-based explanations of reject*, Neurocomputing, vol. 558. Elsevier BV, p. 126722, Nov. 2023. doi: 10.1016/j.neucom.2023.126722

J. Jakob, **A. Artelt**, M. Hasenjäger, and B. Hammer, *Interpretable SAM-kNN Regressor for Incremental Learning on High-Dimensional Data Streams*, Applied Artificial Intelligence, vol. 37, no. 1. Informa UK Limited, Apr. 09, 2023. doi: 10.1080/08839514.2023.2198846

U. Kuhl, **A. Artelt**, and B. Hammer, *Let's go to the Alien Zoo: Introducing an experimental framework to study usability of counterfactual explanations for machine learning*, Frontiers in Computer Science, vol. 5. Frontiers Media SA, Mar. 21, 2023. doi: 10.3389/fcomp.2023.1087929

A. Artelt, F. Hinder, V. Vaquet, R. Feldhans, and B. Hammer, *Contrasting Explanations for Understanding and Regularizing Model Adaptations*, Neural Processing Letters, vol. 55, no. 5. Springer Science and Business Media LLC, pp. 5273–5297, May 04, 2022. doi: 10.1007/s11063-022-10826-5.

A. Artelt and B. Hammer, *Efficient computation of counterfactual explanations and counterfactual metrics of prototype-based classifiers*, Neurocomputing, vol. 470. Elsevier BV, pp. 304–317, Jan. 2022. doi: 10.1016/j.neucom.2021.04.129.

C. L. Geminn, J. Szczuka, C. Weber, **A. Artelt**, and L. Varonina, *Kinder als Nutzende smarterer Sprachassistenten*, Datenschutz und Datensicherheit - DuD, vol. 44, no. 9. Springer Science and Business Media

Conference Publications

A. Artelt, J. Strotherm, L. Hermes, B. Hammer, *Neural Surrogate Model in an Extended Kalman Filter for Chlorine Concentration State Estimation in Water Distribution Systems*, accepted at 6th International Conference on Control and Fault-Tolerant Systems (SysTol), 2025

A. Mazur, P. Henning, **A. Artelt**, L. Koller, C. Hartmann, A. Traechtler, B. Hammer, *Studying the Generalization Behavior of Surrogate Models for Punch-Bending by Generating Plausible Counterfactuals*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 192–203, Sept. 12, 2025. doi: 10.1007/978-3-032-04555-3_16

A. Artelt, K. Giese, S. Vrachimis, D. Eliades, M. Polycarpou, B. Hammer, *The WaterBenchmarkHub: A Platform for Benchmarks in Water Distribution Networks*, 21st International Computing & Control in the Water Industry Conference (CCWI), 2025. doi: 10.15131/shef.data.29921051.v1

P. Stahlhofen, D. Zanutto, **A. Artelt**, L. Hermes, A. Müller, B. Hammer, D. Savic *Reinforcement Learning for Dynamic Pump Scheduling under Demand Uncertainty*, 21st International Computing & Control in the Water Industry Conference (CCWI), 2025. doi: 10.15131/shef.data.29921117.v1



I. Ashraf, **A. Artelt**, B. Hammer, *Scalable and Robust Physics-Informed Graph Neural Networks for Water Distribution Systems*, accepted at IEEE International Joint Conference on Neural Networks, 2025 doi:

A. Artelt, A. Gregoriades, *Application of a Multi-instance Counterfactual Explanation Method*, ECAI – Workshop on Agents in Traffic and Transportation (ATT), eds. A. Bazzan, I. Dusparic, M. Lujak, and G. Vizzari, 2025. Available at: <https://ceur-ws.org/Vol-3813/8.pdf>

J. Szczuka, A. Horstmann, N. Szymczyk, C. Strathmann, **A. Artelt**, L. Varonina, L.M. Bohnenkamp, N. Krämer, *Let Me Explain What I Did or What I Would Have Done: An Empirical Study on the Effects of Explanations and Person-Likeness on Trust in and Understanding of Algorithms*, Nordic Conference on Human-Computer Interaction. ACM, pp. 1–13, Oct. 13, 2024. doi: 10.1145/3679318.3685351

V. Vaquet, F. Hinder, **A. Artelt**, I. Ashraf, J. Strotherm, J. Vaquet, J. Brinkrolf, B. Hammer, *Challenges, Methods, Data – a Survey of Machine Learning in Water Distribution Networks*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 155–170, 2024. doi: 10.1007/978-3-031-72356-8_11

A. Artelt, B. Hammer, *Analyzing the Influence of Training Samples on Explanations*, IJCAI – Workshop on Explainable Artificial Intelligence (XAI), ed. T. H. Tim Miller Hendrik Baier, 2024. Available at <https://doi.org/10.48550/arXiv.2406.03012>

A. Artelt, M. Kyriakou, S. Vrachimis, D. Eliades, B. Hammer, M. Polycarpou, *A Toolbox for Supporting Research on AI in Water Distribution Networks* , IJCAI – Workshop on AI in Critical Infrastructure, ed. R. G. Felipe Leno da Silva Wencong Su, 2024, Available at <https://doi.org/10.48550/arXiv.2406.02078>
 Best paper award.

A. Artelt, A. Gregoriades, *A Two-Stage Algorithm for Cost-Efficient Multi-instance Counterfactual Explanations*, 2nd World Conference on eXplainable Artificial Intelligence Late-breaking Work, Demos and Doctoral Consortium Joint Proceedings, ed. G. M. Luca Longo Weiru Liu, 2025. Available at https://ceur-ws.org/Vol-3793/paper_30.pdf

A. Artelt, K. Malialis, C. G. Panayiotou, M. M. Polycarpou, and B. Hammer, *Unsupervised Unlearning of Concept Drift with Autoencoders*, 2023 IEEE Symposium Series on Computational Intelligence (SSCI). IEEE, pp. 703–710, Dec. 05, 2023. doi: 10.1109/ssci52147.2023.10372001

U. Kuhl, **A. Artelt**, and B. Hammer, *For Better or Worse: The Impact of Counterfactual Explanations’ Directionality on User Behavior in xAI*, Communications in Computer and Information Science. Springer Nature Switzerland, pp. 280–300, 2023. doi: 10.1007/978-3-031-44070-0_14

A. C. Horstmann, J. Szczuka, L. Mavrina, **A. Artelt**, C. Strathmann, N. Szymczyk, et al., *Can You Explain Why You Did Not Recommend Something Else? An Experimental Study on the Effects of Contrastive Explanations and Person-Likeness on Trust in and Understanding of Algorithms*, MediaPsych 2023, Available at https://melusina-pubs.fra1.digitaloceanspaces.com/xxx_09_melzer_proceedings/xxx_09_melzer_proceedings.pdf

A. Artelt, B. Hammer, *"Explain it in the Same Way!" – Model-Agnostic Group Fairness of Counterfactual Explanations*, IJCAI – Workshop on XAI, ed. H. B. Ofra Amir Tim Miller, 2023, doi: 10.48550/arXiv.2211.14858

P. Stahlhofen, **A. Artelt**, L. Hermes, and B. Hammer, *Adversarial Attacks on Leakage Detectors in Water Distribution Networks*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 451–463, 2023. doi: 10.1007/978-3-031-43078-7_37

A. Artelt and A. Gregoriades, *'How to Make Them Stay?': Diverse Counterfactual Explanations of Employee Attrition*, Proceedings of the 25th International Conference on Enterprise Information Systems. SCITEPRESS - Science and Technology Publications, pp. 532–538, 2023. doi: 10.5220/0011961300003467

I. Ashraf, L. Hermes, **A. Artelt**, and B. Hammer, *Spatial Graph Convolution Neural Networks for Water Distribution Systems*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 29–41, 2023. doi: 10.1007/978-3-031-30047-9_3

A. Artelt, A. Schulz, and B. Hammer, *'Why Here and not There?': Diverse Contrasting Explanations of Dimensionality Reduction*, Proceedings of the 12th International Conference on Pattern Recognition Applications and Methods. SCITEPRESS - Science and Technology Publications, pp. 27–38, 2023. doi: 10.5220/0011618300003411

A. Artelt and B. Hammer, *'Even if ...' – Diverse Semifactual Explanations of Reject*, 2022 IEEE Symposium Series on Computational Intelligence (SSCI). IEEE, pp. 854–859, Dec. 04, 2022. doi: 10.1109/ssci51031.2022.10022139

R. Velioglu, J. P. Göpfert, **A. Artelt**, and B. Hammer, *Explainable Artificial Intelligence for Improved Modeling of Processes*, Lecture Notes in Computer Science. Springer International Publishing, pp. 313–325, 2022. doi: 10.1007/978-3-031-21753-1_31

A. Artelt, J. Brinkrolf, R. Visser, and B. Hammer, *Explaining Reject Options of Learning Vector Quantization Classifiers*, Proceedings of the 14th International Joint Conference on Computational Intelligence. SCITEPRESS - Science and Technology Publications, 2022. doi: 10.5220/0011389600003332

A. Artelt, R. Visser, and B. Hammer, *Model Agnostic Local Explanations of Reject*, ESANN 2022 proceedings. Ciaco - i6doc.com, pp. 97–102, 2022. doi: 10.14428/esann/2022.es2022-34

A. Mazur, **A. Artelt**, and B. Hammer, *Improving Zorro Explanations for Sparse Observations with Dense Proxy Data*, ESANN 2022 proceedings. Ciaco - i6doc.com, pp. 527–532, 2022. doi: 10.14428/esann/2022.es2022-27

F. Hinder, **A. Artelt**, V. Vaquet, and B. Hammer, *Contrasting Explanation of Concept Drift*, ESANN 2022 proceedings. Ciaco - i6doc.com, 2022. doi: 10.14428/esann/2022.es2022-71

V. Vaquet, **A. Artelt**, J. Brinkrolf, and B. Hammer, *Taking Care of Our Drinking Water: Dealing with Sensor Faults in Water Distribution Networks*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 682–693, 2022. doi: 10.1007/978-3-031-15931-2_56

J. Jakob*, **A. Artelt***, M. Hasenjäger, B. Hammer, *SAM-kNN Regressor for Online Learning in Water Distribution Networks*, Lecture Notes in Computer Science. Springer Nature Switzerland, pp. 752–762, 2022. doi: 10.1007/978-3-031-15934-3_6

* Shared first authorship.

A. Artelt, S. Vrachimis, D. Eliades, M. Polycarpou, B. Hammer, *One Explanation to Rule them All — Ensemble Consistent Explanations*, IJCAI – Workshop on XAI, eds. R. Weber, O. Amir, and T. Miller, 2022. doi: 10.48550/arXiv.2205.08974

F. Hinder, V. Vaquet, J. Brinkrolf, **A. Artelt**, and B. Hammer, *Localization of Concept Drift: Identifying the Drifting Datapoints*, 2022 International Joint Conference on Neural Networks (IJCNN). IEEE, pp. 1–9, Jul. 18, 2022. doi: 10.1109/ijcnn55064.2022.9892374

U. Kuhl, **A. Artelt**, and B. Hammer, *Keep Your Friends Close and Your Counterfactuals Closer: Improved Learning From Closest Rather Than Plausible Counterfactual Explanations in an Abstract Setting*, 2022 ACM Conference on Fairness, Accountability, and Transparency. ACM, pp. 2125–2137, Jun. 20, 2022. doi: 10.1145/3531146.3534630

J. Szczuka, N. Szymczyk, C. Strathmann, **A. Artelt**, L. Varonina, N. Krämer, *Let me explain my algorithms: An empirical investigation about the effects of explanations and personhood on trust and understanding*, DGPs 2022

A. Artelt, V. Vaquet, R. Velioglu, F. Hinder, J. Brinkrolf, M. Schilling, B. Hammer, *Evaluating Robustness of Counterfactual Explanations*, 2021 IEEE Symposium Series on Computational Intelligence (SSCI). IEEE, pp. 01–09, Dec. 05, 2021. doi: 10.1109/ssci50451.2021.9660058

A. Artelt, F. Hinder, V. Vaquet, R. Feldhans, and B. Hammer, *Contrastive Explanations for Explaining Model Adaptations*, Lecture Notes in Computer Science. Springer International Publishing, pp. 101–112, 2021. doi: 10.1007/978-3-030-85030-2_9

A. Artelt and B. Hammer, *Efficient computation of contrastive explanations*, 2021 International Joint Conference on Neural Networks (IJCNN). IEEE, pp. 1–9, Jul. 18, 2021. doi: 10.1109/ijcnn52387.2021.9534454

N. Krämer, J. Szczuka, A. Rosnagel, C. Geminn, S. Kopp, B. Hammer, L. Varonina, **A. Artelt**, A. Manzeschke, C. Weber, *Improving and Evaluating Conversational User Interfaces for Children*, IUI 2020

A. Artelt and B. Hammer, *Convex Density Constraints for Computing Plausible Counterfactual Explanations*, Lecture Notes in Computer Science. Springer International Publishing, pp. 353–365, 2020. doi: 10.1007/978-3-030-61609-0_28

F. Hinder, **A. Artelt**, B. Hammer, *Towards non-parametric drift detection via Dynamic Adapting Window Independence Drift Detection (DAWIDD)*, Proceedings of the 37th international conference on machine learning, ICML 2020, (PMLR), 4249–4259, Available at <http://proceedings.mlr.press/v119/hinder20a.html>

A. Artelt, B. Hammer, *Efficient computation of counterfactual explanations of LVQ models*, ESANN 2020 proceedings. Ciaco - i6doc.com, Available at: <https://www.esann.org/sites/default/files/proceedings/2020/ES2020-55.pdf>

J. P. Göpfert, **A. Artelt**, H. Wersing, and B. Hammer, *Adversarial Attacks Hidden in Plain Sight*, Lecture Notes in Computer Science. Springer International Publishing, pp. 235–247, 2020. doi: 10.1007/978-3-030-44584-3_19

Policy Papers

A. Horstmann, **A. Artelt**, C. Geminn, B. Hammer, S. Kopp, A. Manzeschke, L. Mavrin, *Konversation mit Künstlicher Intelligenz: Gewonnene Erkenntnisse und künftige Herausforderungen*, DuEPublico: Duisburg-Essen Publications online, University of Duisburg-Essen, Germany, Feb. 2024. doi: 10.17185/DUEPUBLICO/81565

A. Horstmann, N. Krämer, C. Geminn, T. Bile, C. Weber, A. Manzeschke, L. Mavrina, S. Kopp, **A.**

Artelt, B. Hammer, *Kann sich künstliche Intelligenz selbst erklären?: Wie Erklärungen aus rechtswissenschaftlicher und ethischer Sicht gestaltet sein sollten und was Psychologie und Informatik dazu beitragen können*, Universität Duisburg-Essen, Universitätsbibliothek, Feb. 2023. doi: 10.17185/DUEPUBLICO/77378

A. Artelt, C. Geminn, et al., *Gesundheits-Apps und Digitale Gesundheitsanwendungen (DiGAs): Ethische, rechtliche, psychologische und informatische Perspektiven*, Universität Duisburg-Essen, Universitätsbibliothek, Feb. 2023. doi: 10.17185/DUEPUBLICO/77379

A. Artelt, C. Geminn, B. Hammer, A. Manzeschke, L. Mavrina, and C. Weber, *Faire Algorithmen und die Fairness von Erklärungen: Informatische, rechtliche und ethische Perspektiven*, DuEPublico: Duisburg-Essen Publications online, University of Duisburg-Essen, Germany, Jul. 2022. doi: 10.17185/DUEPUBLICO/76311

J. Szczuka, **A. Artelt**, C. Geminn, et al., *Können Kinder aufgeklärte Nutzer*innen von Sprachassistenten sein?: Rechtliche, psychologische, ethische und informatische Perspektiven*, Universität Duisburg-Essen, Universitätsbibliothek, 2021. doi: 10.17185/DUEPUBLICO/74238

N. Krämer, **A. Artelt**, C. Geminn, et al., *KI-basierte Sprachassistenten im Alltag: Forschungsbedarf aus informatischer, psychologischer, ethischer und rechtlicher Sicht*, Universität Duisburg-Essen, Universitätsbibliothek, Oct. 2019. doi: 10.17185/DUEPUBLICO/70571

Other Publications and preprints

A. Artelt, S. G. Vrachimis, D. G. Eliades, U. Kuhl, B. Hammer, and M. M. Polycarpou, *Interpretable Event Diagnosis in Water Distribution Networks*, 2025, arXiv. doi: 10.48550/arXiv.2505.07299

A. Artelt and B. Hammer, *Towards Understanding the Influence of Training Samples on Explanations*, 2024, arXiv. doi: 10.48550/ARXIV.2406.03012

A. Artelt, S. Sharma, F. Lecué, and B. Hammer, *The Effect of Data Poisoning on Counterfactual Explanations*, 2024, arXiv. doi: 10.48550/ARXIV.2402.08290

A. Artelt, *Contrasting Explanations in Machine Learning – Efficiency, Robustness & Applications*, PhD thesis, 2023. doi: 10.4119/unibi/2985769

F. Hinder, **A. Artelt**, V. Vaquet, and B. Hammer, *Precise Change Point Detection using Spectral Drift Detection*, 2022, arXiv. doi: 10.48550/ARXIV.2205.06507

A. Artelt and B. Hammer, *Convex optimization for actionable & plausible counterfactual explanations*, 2021, arXiv. doi: 10.48550/ARXIV.2105.07630

F. Hinder, **A. Artelt**, and B. Hammer, *A probability theoretic approach to drifting data in continuous time domains*, 2019, arXiv. doi: 10.48550/ARXIV.1912.01969

A. Artelt and B. Hammer, *On the computation of counterfactual explanations – A survey*, 2019, arXiv. doi: 10.48550/ARXIV.1911.07749

A. Artelt, *CEML - Counterfactuals for Explaining Machine Learning models – A Python toolbox*, GitHub 2019-2023, Available at <https://github.com/andreArtelt/ceml>