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	*Post-doctoral researcher* at Bielefeld University, Germany Machine Learning Group at Faculty of Technology. Research on trustworthy AI in critical applications and supervision of one student research assistant.
2019 - 2024	*PhD researcher* at Bielefeld University, Germany Machine Learning Group at Faculty of Technology. Research on explainable AI.
2014 - 2019	*Teaching assistant* 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	*Software Developer (part time)* 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	*Visiting Researcher* at University of Cyprus, Cyprus Department of Electrical and Computer Engineering / KIOS Research and Innovation Center of Excellence.

Education

2019 - 2024	*PhD in Machine Learning / Dr. rer. nat.*, Bielefeld University PhD thesis: "Contrasting Explanations in Machine Learning Efficiency, Robustness & Applications"
2017 - 2019	*Intelligent Systems / Master of Science*, Bielefeld University
2013 - 2017	*Cognitve Informatics / Bachelor of Science*, Bielefeld University

Publication Record

- h-Index: 14

- i10-index: 28

- Number of citations: 794

Date: 16.02.2026 (h-Index and number of citations according to Google Scholar)

Awards 🏆

2024	AI for CI @ ICJAI 2024, Best Paper Award
2019	*Outstanding TA award* (Course: Introduction to Machine Learning)
2018	*Outstanding TA award* (Course: Introduction to Machine Learning)
2015	*1. Price group project* (Project seminar on software engineering)

Research Visits

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

Professional Memberships

2025 - PRESENT	American Society of Civil Engineers (ASCE), Water Distribution Systems Analysis (WDSA), *Member*
2023 - PRESENT	Institute of Electrical and Electronics Engineers (IEEE), *Member*

Organizational Leadership

2026 - PRESENT	Leading the ASCE WDSA Task Commitee *WaterBenchmarkHub* WaterBenchmarkHub – A standardized platform in the community for hosting, sharing, and accessing benchmarks

Scientific Event Organization

Dagstuhl 2026	*Explainable AI in Energy and Critical Infrastructure Systems* (Dagstuhl Seminar) **A. Artelt**, K. Baker, B. Hammer, F. Leofante
WDSA CCWI 2026	*A Practical Introduction to Physics-informed Deep Learning* *for Surrogate Models of Drinking Water Systems* (Tutorial) **A. Artelt**, I. Ashraf, L. Hermes
WDSA CCWI 2026	*Battle of the Water Futures* (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	*1st AI for Drinking Water Chlorination Challenge* (Competition) **A. Artelt**, L. Hermes, J. Strotherm, B. Hammer, S. Vrachimis, D. Eliades, M. Kyriakou, M. Polycarpou, S. Paraskevopoulos, S. Vrochidis, R. Taormina, D. Savic, P. Koundouri
AAAI 2025	*(Really) Using Counterfactuals to Explain AI Systems: Fundamentals,* *Methods, & User Studies for XAI* (Tutorial) U. Kuhl, **A. Artelt**, M. Keane
AAAI 2025	*Explainable AI in Energy and Critical Infrastructure Systems* (Bridge) **A. Artelt**, D. Eliades, A. Korre, F. Leofante, T. Miller, F. Toni
IJCAI 2024	*All You Ever Need to Know About Counterfactual Explanations:* *Fundamentals, Methods, & User Studies for XAI* (Tutorial) **A. Artelt**, U. Kuhl, M. Keane
WDSA CCWI 2024	*Introduction to the EPANET-Python Toolkit (EPyT)* *for Smart Water Network Simulations* (Tutorial) D. Eliades, S. Vrachimis, M. Kyriakou, **A. Artelt**
IEEE WCCI 2024	*Machine Learning in Critical Infrastructure* (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, AAMAS, ECML, xAI, ECAI, AAMAS, IEEE IJCNN, WDSA CCWI, IEEE SSCI, IEEE CAI, HICSS, ICANN, ESANN, EXPLAINABIL-ITY, 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, Neurocomputing, 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 conference comitte memberships

- Conflict of Interest Chair (COI) at *IEEE IJCNN 2026*

- Area Chair (AC): *IEEE IJCNN 2025-2026, IEEE ICASSP 2026*

TEACHING EXPERIENCE

Supervision

- NUMBER OF BACHELOR THESES: 15

- NUMBER OF MASTER PROJECTS: 4

- NUMBER OF MASTER THESES: 4

Course Instructor/Lecturer

SUMMER 2026 *Machine Learning for Water Distribution Networks*
SUMMER 2025 *Machine Learning for Water Distribution Networks*

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*

Teaching Assistant

WINTER 2018/19 *Introduction to Machine Learning*🏆; *Applied Optimization*
SUMMER 2018 *Algorithms in Computer Science*[1]
WINTER 2017/18 *Introduction to Machine Learning*🏆
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]
SUMMER 2015 *Object Orientated Progamming in Java*[1]
WINTER 2014/15 *Algorithms and Data structures & Functional Programming in Haskell*[1]

[1] Course was taught in German.

🏆 Outstanding teaching assistant award.

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

A. Artelt, S. Sharma, F. Lecué, and B. Hammer, *The Effect of Data Poisoning on Counterfactual Explanations*, Information Fusion, 2026. doi: 10.1016/j.inffus.2026.104237

A. Artelt, S. G. Vrachimis, D. G. Eliades, U. Kuhl, B. Hammer, and M. M. Polycarpou, *Interpretable Event Diagnosis in Water Distribution Networks*, Intelligent Systems with Applications, 2026. doi: 10.1016/j.iswa.2025.200621

A. Artelt, M. Olsen, and K. Tierney *On the Hardness of Computing Counterfactual and Semifactual Explanations in XAI*, Transactions of Machine Learning Research (TMLR), 2025. url: https:

//openreview.net/pdf?id=aELzBw0q1O

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
[*] Contributed equally.

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 smarter Sprachassistenten*, Datenschutz und Datensicherheit - DuD, vol. 44, no. 9. Springer Science and Business Media LLC, pp. 600–605, Aug. 26, 2020. doi: 10.1007/s11623-020-1332-y

Conference Puplications

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*, 6th International Conference on Control and Fault-Tolerant Systems (SysTol), 2025. doi: 10.1109/SysTol66549.2025.11267307

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: 10.1109/IJCNN64981.2025.11229349

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

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