



Nil-Jana Akpinar

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Education

Carnegie Mellon University

Ph.D. in Statistics and Machine Learning (joint), GPA 4.0/4.0, Thesis

Carnegie Mellon University

M.Sc. in Statistics, GPA 4.0/4.0

University of Freiburg

M.Sc. in Mathematics

University of Freiburg

B.sc. in Economics

University of Freiburg

B.Sc. in Mathematics

Aug 2018 - Aug 2023

Pittsburgh, PA

Aug 2018 - May 2020

Pittsburgh, PA

Oct 2015 - Jul 2018

Freiburg, Germany

Oct 2013 - Sept 2017

Freiburg, Germany

Oct 2012 - Sept 2015

Freiburg, Germany

Experience

Amazon AWS AI/ML

Postdoctoral Scientist, Responsible AI

Sept 2023 -

Seattle, WA

LinkedIn Corporation

Artificial Intelligence - Machine Learning Engineering Intern, Responsible AI

May 2021 - Aug 2021

Sunnyvale, CA

LinkedIn Corporation

Fairness and Privacy Research Engineering Intern, Anti-Abuse AI

May 2020 - Aug 2020

Sunnyvale, CA

Carnegie Mellon University

Graduate Research Assistant, Advisors: Alexandra Chouldechova & Zachary C. Lipton

Aug 2018 - Aug 2023

Freiburg, Germany

University of Freiburg

Research Assistant, Information System Research

Apr 2016 - Jul 2018

Freiburg, Germany

Selected Publications (Google Scholar)

Nil-Jana Akpinar, Sina Fazelpour (2024) *Authenticity and exclusion: social media recommendation algorithms and the dynamics of belonging in professional networks*. Preprint, [arXiv:2407.08552](https://arxiv.org/abs/2407.08552).

Riccardo Fogliato, Pratik Patil, **Nil-Jana Akpinar**, Mathew Monfort (2024) *Precise Model Benchmarking with Only a Few Observations*. Under review.

Valeriia Cherepanova, Chia-Jung Lee, **Nil-Jana Akpinar**, Riccardo Fogliato, Martin Andres Bertran, Michael Kearns, James Zou (2024) *Improving LLM Group Fairness on Tabular Data via In-Context Learning*. Under review.

Vibhu Sharma, Shantanu Gupta, **Nil-Jana Akpinar**, Zachary Lipton, Liu Leqi (2024) *A Unified Causal Framework for Auditing Recommender Systems*. Under review.

Jaqueline Maasch, Violet Chen, Agni Orfanoudaki, **Nil-Jana Akpinar**, Kyra Gan (2024) *Local Causal Discovery for Structural Evidence of Direct Discrimination*. Under review, [arXiv:2405.14848](https://arxiv.org/abs/2405.14848).

Nil-Jana Akpinar, Zachary C. Lipton, Alexandra Chouldechova (2024) *The Impact of Differential Feature Under-reporting on Algorithmic Fairness*. FAccT 2024, [arXiv:2401.08788](https://arxiv.org/abs/2401.08788).

Nil-Jana Akpinar, Manish Nagireddy, Logan Stapelton, Hao-Fei Cheng, Haiyi Zhu, Steven Wu, Hoda Heidari (2022) *A Sandbox Tool to Bias(Stress)-Test Fairness Algorithms*. EAAMO 2022 poster, preprint [arXiv:2204.10233](https://arxiv.org/abs/2204.10233).

Nil-Jana Akpinar*, Leqi Liu*, Dylan Hadfield-Menell, Zachary C. Lipton (2022) *Counterfactual Metrics for Auditing Black-Box Recommender Systems for Ethical Concerns*. Responsible Decision Making in Dynamic Environments Workshop, ICML 2022.

Nil-Jana Akpinar, Cyrus DiCiccio, Preetam Nandu, Kinjal Basu (2022) *Long-term Dynamics of Fairness Intervention in Connection Recommender Systems*. AIES 2022.

Nil-Jana Akpinar, Maria De-Arteaga, Alexandra Chouldechova (2021) *The effect of differential victim crime reporting on predictive policing systems*. FAccT 2021.

Nil-Jana Akpinar, Aaditya Ramdas, Umut Acar (2020) *Analyzing Student Strategies In Blended Courses Using Clickstream Data*. EDM 2020. [Presentation recording](#).

Nil-Jana Akpinar, Bernhard Kratzwald, Stefan Feuerriegel (2020) *Sample Complexity Bounds for Recurrent Neural Networks with Application to Combinatorial Graph Problems*. AAAI student abstract, preprint [arXiv: 1901.10289](https://arxiv.org/abs/1901.10289), [Poster](#).

Nil-Jana Akpinar, Simon Alfano, Gregory Kersten, Bo Yu (2017) *The Role of Sentiment and Cultural Differences in the Communication Process of e-Negotiations*. GDN 2017.

* Equal contribution

Honors and Awards

- Amazon Graduate Research Fellowship (2021)
- Invited to Doctoral Consortium: FAccT (2021, 2022), EAAMO (2022)
- AAAI best three minute student presentation award (2020)
- German National Academic Foundation Scholarship (2013-2018) & Research Visit Grant (2016)
- Economics Award by Südwestmetall (2012)
- Mathematics Award by the German Mathematical Society (2012)

Teaching and Mentorship

Teaching Assistant, Carnegie Mellon University

- Statistical Graphics and Visualization (Spring 2020), Special Topics: Text Analysis (Fall 2019), Advances Methods for Data Analysis (Spring 2019), Probability Theory for Computer Scientist (Fall 2018)

Data Science Initiative Fellow, Carnegie Mellon University

- Mentored groups of undergraduate students in corporate data science consulting projects.
- Penguin Random House (2019), Giant Eagle (2020)

Teaching Assistant, University of Freiburg

- Management Information Science / Introduction to Programming in R (Spring 2016), Mathematics for Natural Scientists (Fall 2015), Introduction to Programming in C (Spring 2014, 2018), Linear Algebra (Fall 2014)

Talks, Workshops & Tutorials

Invited talks

- Keynote at BIAS workshop at SIGIR 2024, [website](#).
- MILA x Vector Institute DEFirst group, [recording](#) (2023)
- INFORMS annual meeting, Session on Advances in Responsible AI: From Theory to Applications (2022)
- LinkedIn Responsible AI team (2022)
- AMS Sectional Meeting on Social Change in and through Mathematics and Education (2021)
- Guest lecture on Word Embeddings in Text Analysis class, CMU (2019)

Workshops

Valeriia Cherepanova, Bo Li, Niv Cohen, Yifei Wang, Yisen Wang, Avital Shafran, **Nil-Jana Akpınar**, James Zou (2024) *Red Teaming GenAI: What Can We Learn From Adversaries?* Accepted to Neurips 2024.

Tutorials

Nil-Jana Akpınar, Alicia Sagae, Riccardo Fogliato, Mia Mayer, Michael Kearns (2024) *Responsible AI in the Generative Era: Science and Practice*. FAccT 2024, [website](#).

Selected Press

- *Long-term Dynamics of Fairness Intervention in Connection Recommender Systems*, ML@CMU blog, [link](#) (2022)
- *Algoritmos de predicción policial: para qué se usan y por qué se enseñan con los más pobres*, El País, [link](#) (2021)
- *Predictive policing is still racist - whatever data it uses*, MIT Technology Review, [link](#) (2021)

Service

- **Reviewer:** TMLR (2023), AIES (2023, 2024), ACM Transactions on Recommender Systems (2023), FAccT (2022, 2023, 2024), JMLR (2022), Neurips (2021), ICML ML4Data workshop (2021), ICML ethics review (2024), EMNLP (2024)
- **Area Chair:** ICLR Responsible AI workshop (2021)
- **CMU:** Editor ML@CMU blog (2021 – 2023), Organizer Fairness, Ethics, Accountability, Transparency in ML reading group (2021), Board member CMQ+ (2019 – 2020)
- **University of Freiburg:** Three times elected member of faculty council (2015 – 2018), elected member of senate (2015), student council member (2013 – 2018), member of examination board and faculty appointment committees

Computer Skills

Programming: Python, R