




# 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 team

Sept 2023 – current

Seattle, WA

### LinkedIn Corporation

Artificial Intelligence – Machine Learning Engineering Intern, Responsible AI team

May 2021 – Aug 2021

Sunnyvale, CA

### LinkedIn Corporation

Fairness and Privacy Research Engineering Intern, Anti-abuse team

May 2020 – Aug 2020

Sunnyvale, CA

### University of Freiburg

Research Assistant, Information System Research

Apr 2016 – Jul 2018

Freiburg, Germany

## Selected Publications ([Google Scholar](#))

Jaqueline Maasch, Violet Chen, Agni Orfanoudaki, **Nil-Jana Akpinar**, Kyra Gan (2025) *Local Causal Discovery for Structural Evidence of Direct Discrimination*. AAAI 2025.

**Nil-Jana Akpinar\***, Sina Fazelpour\* (2024) *Authenticity and exclusion: social media recommendation algorithms and the dynamics of belonging in professional networks*. Presented at MINT-Yale Workshop on Normative Philosophy of Computing 2024. Full paper under journal review, preprint [arXiv:2407.08552](https://arxiv.org/abs/2407.08552).

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*. Presented at Neurips 2024 Safe Generative AI Workshop & Neurips 2024 Table Representation Learning Workshop. Preprint [arXiv:2412.04642](https://arxiv.org/abs/2412.04642).

Vibhu Sharma, Shantanu Gupta, **Nil-Jana Akpinar**, Zachary Lipton, Liu Leqi (2024) *A Unified Causal Framework for Auditing Recommender Systems*. Presented at RecSys 2024 FAccTRec Workshop. Preprint [arXiv:2409.13210](https://arxiv.org/abs/2409.13210).

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

**Nil-Jana Akpinar**, Zachary C. Lipton, Alexandra Chouldechova (2024) *The Impact of Differential Feature Under-reporting on Algorithmic Fairness*. FAccT 2024.

**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*. Conference on Educational Data Mining (EDM) 2020.

**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

## Talks, Workshops & Tutorials

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### Invited talks

- Keynote at BIAS workshop SIGIR 2024, [website](#) (2024)
- 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)

### Tutorials

Alicia Sagae, **Nil-Jana Akpinar**, Riccardo Fogliato, Mia Mayer, Michael Kearns (2024) *Responsible AI in the Generative Era: Science and Practice*. Tutorial at FAccT 2024.

### Workshops

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

## Honors and Awards

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- Amazon Graduate Research Fellowship (2021)
- Invited to Doctoral Consortium: FAccT (2021, 2022), EAAMO (2022)
- AAI 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)

## Selected Press

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- *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)

## Teaching and Mentorship

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### **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)

## Service

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- **Reviewer and Area Chair**: 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), IRRJ (2024), ICLR Responsible AI workshop (2021, area chair)
- **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