Nil-Jana Akpinar

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Senior Applied Scientist with 7+ years of experience in evaluating and developing trustworthy AI systems.

Experience

Senior Applied Scientist *Microsoft E&D, GXP Research; Redmond, WA* Aug 2025 – ongoing

- Conducting research on Copilot features for productivity applications (email and calendar), focusing on LLM-powered user experiences and scientific advancements
- Collaborating with product teams to design, evaluate, and deploy novel AI functionalities, bridging research insights with real-world impact

Postdoctoral Scientist – *Amazon AWS, Responsible AI; Seattle, WA* Sept 2023 – Aug 2025

- Evaluated LLM robustness in question-answering using inquiry persona-based perturbations; designed framework for automated evaluation with synthetic inquiry styles
- Led research on trust in LLM-generated summaries, including study design, participant recruitment, and mixed-methods analysis to uncover user perceptions and failure modes
- Developed techniques for LLM-assisted data augmentation and prompt tuning to evaluate and improve performance and fairness in downstream tasks; partly published in NeurIPs 2024 workshops
- Organized NeurIPs 2024 workshop on red-teaming GenAI, FAccT 2024 tutorial, and weekly Responsible AI science meetings, inviting cross-org and external researchers to present
- Mentored interns, contributed to internal tools and code review, and reviewed 15+ papers for FAccT, ICML, EMNLP etc.

AI – Machine Learning Engineering Intern – *LinkedIn, Responsible AI; Sunnyvale, CA* May 2021 – Aug 2021

- Led research on long-term fairness dynamics in connection recommender systems, developing a realistic simulation and theoretical framework to study feedback loops in statistical parity type interventions
- First-authored peer-reviewed paper 'Long-term Dynamics of Fairness Intervention in Connection Recommender Systems'; published at AIES 2022

Fairness and Privacy Research Engineering Intern – *LinkedIn, Anti-abuse; Sunnyvale, CA* May 2020 – Aug 2020

- Designed and implemented a named entity recognition pipeline to identify and redact privacy-sensitive information in user-generated content
- Collaborated with ML scientists and engineers to integrate models into internal tooling

Technical skills

Languages & Frameworks: Python, PyTorch, HuggingFace Transformers, PEFT, NumPy, Pandas, scikit-learn, R

ML & LLM: Responsible AI, LLM evaluation, Algorithmic fairness, Robustness, Red-teaming and adversarial testing, Prompt tuning, Model monitoring and stress-testing, Privacy, Human-AI interaction

Publications & Talks

Selected publications (Google Scholar)

Cherepanova, Lee, **Akpinar**, et al. *Improving LLM Group Fairness on Tabular Data via In-Context Learning*. AIES 2025.
Akpinar, Lipton, Chouldechova. *The Impact of Differential Feature Under-reporting on Algorithmic Fairness.* FAccT 2024.
Akpinar, DiCiccio, Nandu, Basu. *Long-term Dynamics of Fairness Intervention in Connection Recommender Systems.* AIES 2022.

Selected invited talks
Keynote at BIAS workshop SIGIR 2024, MILA x Vector Institute DEFirst group 2023, INFORMS 2022

Education

Carnegie Mellon University – *Ph.D. in Statistics and Machine Learning (joint)*
Carnegie Mellon University – *M.Sc. in Statistics*
University of Freiburg, Germany – *M.Sc. in Mathematics, B.Sc. in Economics, B.Sc. in Mathematics*

Last updated: September 2025