

Bashir Rastegar Panah

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About Me

I am an applied scientist with hands-on experience in developing data-driven solutions across diverse domains, including machine learning observability, recommender systems, and genomics. My recent work experience involves building end-to-end AI applications powered by large language models.

Experiences

- ◇ **Harness**, Mountain View, CA Feb 2024 - present
Senior Machine Learning Engineer
Developing AI-powered software development tools (real-time code completion, DevOps automation).
Developed an evaluation framework for applications of large language models in software delivery.
- ◇ **Fiddler AI**, Palo Alto, CA Nov 2021 - Jan 2024
AI Scientist
Developed model-based safety metrics for large language models using low-rank fine-tuning.
Designed and implemented tools for measuring distributional shifts in unstructured data.
Designed and prototyped anomaly detection algorithms for text and image embeddings.
Developed a compliance report generator library for the Fiddler platform. 📄
- ◇ **Boston University**, Boston, MA Sept 2014 - Aug 2021
Graduate Research Assistant
Developed new tools for enhancing fairness, privacy, and explainability of recommender systems.
Developed graph-based data mining techniques for analyzing single-cell RNA sequencing data.
- ◇ **Max Planck Institute SWS**, Saarbrücken, Germany Feb 2019 - May 2019
Internship
Designed a multi-armed bandit framework for auditing data minimization in predictive ML models.
- ◇ **Fraunhofer IAIS**, Sankt Augustin, Germany Sept 2012 - May 2014
Machine Learning Engineer
Developed machine learning solutions for analyzing user preferences in online recipe platforms.
- ◇ **University of Bonn**, Germany Sept 2011 - Jan 2012
Student Research Assistant at Signal Processing Department
Implemented matrix-factorization methods for detecting auditory objects in audio signals.

Education

- ◇ **Boston University**, Ph.D. Computer Science Boston, MA, 2021
- ◇ **University of Bonn**, M.Sc. Computer Science Bonn, Germany, 2013
- ◇ **University of Isfahan**, B.Sc. Software Engineering Isfahan, Iran, 2010

Patent

“System and Method for Data Drift Detection to Improve Data Integrity for Data within a Database”
US Patent No. 11,836,163 (Dec 2023)

Selected Publications

(See my Google Scholar profile for a complete list of publications.)

- ◇ “Auditing Black-box Prediction Models for Data Minimization Compliance” **NeurIPS 2021** 📄 📄
- ◇ “Single-cell transcriptional networks in differentiating preadipocytes suggest drivers associated with tissue heterogeneity” **Nature Communications (2020)** 📄 📄
- ◇ “Fighting Fire with Fire: Using Antidote Data to Improve Polarization and Fairness of Recommender Systems” **WSDM 2019** 📄 📄
- ◇ “Collective Attention to Social Media Evolves According to Diffusion Models” **WWW 2014** 📄