Bashir Rastegar Panah

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Experiences

◇ **Fiddler AI**, Palo Alto, CA . . . . Nov 2021 - present
Data Scientist II
Designed an outlier detection algorithm for high-dimensional and unstructured data.
Designed drift detection methods for high-dimensional and unstructured data.
Worked on improving various monitoring and explainability features in Fiddler platform.
Implemented embedding methods for visualizing high-dimensional data in Fiddler platform.

◇ **Boston University**, Boston, MA . . . . Sept 2014 - Aug 2021
Graduate Research Assistant
Developed new tools for enhancing fairness, privacy, and explainability of ML algorithms.
Developed data mining and graph mining techniques for analyzing single-cell genomics data.

◇ **Max Planck Institute SWS**, Saarbrücken, Germany . . . . Feb 2019 - May 2019
Internship
Worked on operationalizing data protection regulations for learning systems.
Developed a bandit framework for auditing data minimization in prediction models.

◇ **Fraunhofer IAIS**, Sankt Augustin, Germany . . . . Sept 2012 - May 2014
Machine Learning Engineer
*Implemented supervised and unsupervised learning algorithms for creating insight about and
predicting 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

Skills

◇ Over 10 years of research and development experience in adopting data-driven solutions.

◇ Fluent in Python and its various data science, natural language processing, scientific computing, machine learning, and visualization libraries.

◇ Strong background knowledge of machine learning, deep learning, signal processing, network science, and optimization.

◇ Experience of production code development on distributed and containerized architectures.

◇ Worked in highly collaborative environments in both academia and industry.

Patent

"System and Method for Data Drift Detection to Improve Data Integrity for Data within a Database" (filed on Sept 2022)

Publications   **Responsible AI**

⋄ "Auditing Black-box Prediction Models for Data Minimization Compliance" Bashir Rastegarpanah, Krishna P. Gummadi, Mark Crovella. **NeurIPS 2021** ⭕

⋄ "Fair Inputs and Fair Outputs: The Incompatibility of Fairness in Privacy and Accuracy" Bashir Rastegarpanah, Mark Crovella, Krishna P. Gummadi. **FairUMAP 2020** 🅟

⋄ "Fighting Fire with Fire: Using Antidote Data to Improve Polarization and Fairness of Recommender Systems" Bashir Rastegarpanah, Krishna P. Gummadi, Mark Crovella. **WSDM 2019** 🅟 ⭕

⋄ "Exploring Explanations for Matrix Factorization Recommender Systems" Bashir Rastegarpanah, Mark Crovella, Krishna P. Gummadi. **FATREC 2017** 🅟 ⭕

Network Science

⋄ "Single-cell transcriptional networks in differentiating preadipocytes suggest drivers associated with tissue heterogeneity" Ramirez, Alfred K., Simon N. Dankel, Bashir Rastegarpanah, Weikang Cai, Ruidan Xue, Mark Crovella, Yu-Hua Tseng, C. Ronald Kahn, and Simon Kasif. ***Nature Communications (2020)*** 🅟 ⭕ (Press Coverage: *Medical Xpress*)

⋄ "Collective Attention to Social Media Evolves According to Diffusion Models" Christian Bauckhage, Kristian Kersting, Bashir Rastegarpanah. ***WWW 2014*** 🅟

⋄ "The Weibull as a Model of Shortest Path Distributions in Random Networks" Christian Bauckhage, Kristian Kersting, Bashir Rastegarpanah. ***MLG 2013*** 🅟