Yara Mohammadi Bahram

1 June 1997
School of Electrical and Computer Engineering,
University of Tehran, Iran

Last update: 11 Oct, 2022
yaramohamadi.github.io 🏠
yara.mohamadi@gmail.com @
+98 9188782447 📞
🔧 in S

EDUCATION

2020-Ongoing	**Master of Science in Artificial Intelligence & Robotics** University of Tehran, Tehran, Iran **GPA: 18.83/20** **Ranked 31st** among **+14,000** participants in Computer Engineering nationwide test for Masters studies.
2015-2020	**Bachelor of Science in Computer Engineering** Isfahan University of Technology, Isfahan, Iran **Last year GPA: 17.98/20**

INTERESTS

Learning Theory - Trustworthy ML (Explainability, Fairness, Robustness) - Causal Inference

PUBLICATIONS

TO BE SUBMITTED:	*Y Deldjoo,* **YM Bahram**, *M Varasteh, N Tintarev* Fairness auditing through the lens of Counterfactual Explanations ***Draft available***
UNDER PREPERATION:	**YM Bahram**, *MA Sadeghi* Post-Regularization: A survey on generalization after overfitting ***draft available***

RESEARCH EXPERIENCE

Researcher 05/2022 - Ongoing	**Polytechnic University of Bari** Italy (Online)	Dr. Yashar Deldjoo
	Exploring causal intervention for bias mitigation and fairness in recommender systems. (Work in Progress)	
	Exploring fairness auditing via counterfactual explanations in classification models.	
Research Assistant 06/2021 - Ongoing	**University of Tehran** Computational Modeling and Machine Learning Lab	Dr. Amin Sadeghi
	Decomposing and isolating implicit learning objectives from the loss term during the training of Deep NNs (Work in Progress)	
	Explaining the effect of adversarial perturbations *on each layer* of deep models via self-supervised finetuning of the layer.	
	Devising a systematic review on the concept of post-training regularization.	
Research Intern 08/2019 - 02/2020	**Isfahan University of Technology** Hardware Design & Image Processing Lab	Dr. Shadrokh Samavi
	Investigating different theoretical methods for hardware optimization and implementation of deep learning architectures.	
	Bachelor Thesis: Patched-Based CNN for Instance Segmentation of Pathology Images	

Teaching Experience

Mentor 07/2022 - 08/2022	**HooshBaaz** Data Analytics Bootcamp 🔗 University of Tehran Group collaboration with 7 other mentors for educating 80 students during 14 data science workshops.
Teaching Assistant 07/2022 - 08/2022	**Neuromatch** Academy Deep Learning Summer School ✹ USA (Online) Selected as TA for full-time supervision on the learning of 16 students from different countries, and leading 2 research group projects during 3 weeks.
Teaching Assistant 09/2021 - Ongoing	**Graduate University Courses** University of Tehran
Personal 01/2022	**Publishing a free Machine Learning course online** ▶ 🔗 Created over 2 hours of tutorials in Persian language with Hands-On exercises.

- Machine Learning — Dr. Mohammad-Reza Dehaqani
- Deep Generative Models (Lead) — Dr. Mostafa Tavassolipour
- Advanced Deep Learning — Dr. Amin Sadeghi
- Data Analytics & Visualization (Lead) — Dr. Amin Sadeghi

Highlighted Projects

Freelance projects — Dr. Mostafa Tavassolipour
- Developing a system for analysis and prediction of Tehran Municipality's salary.

Deep Learning projects 🔗
- Self-supervised learning analysis (SimCLR, CPC, Unsupervised representation learning, PixelCNN)
- Generative model analysis (BigBiGAN, InfoGAN, VQ-VAE, TWR VAE)
- Embedding experiments (Transfer Learning, Visual Question Answering, Multimodal Classification)

Data projects 🔗
- Launching a real-time BigData system for monitoring, analysis, and prediction of Persian Tweets.
- Working with NoSQL Databases (MongoDB, Neo4j, Cassandra, and Elasticsearch).
- Using Spark for text analysis, log-file mining, stock market analysis, and wikipedia analysis.
- Spotify data crawling, analysis, and music recommendation.

Selected Courses

• Reinforcement Learning	Ongoing		• Data Analytics & Visualization	17.25
• Optimization	Ongoing		• Big Data	18.9
• Statistical Inference	18.4		• Database Design	18.5
• Advanced Deep Learning	19.75		• Artificial Intelligence	20
• Machine Learning	19.6		• Multimedia Systems	20

Skills

PROGRAMMING LANGUAGES	Python, R, MATLAB, C/C++
PYTHON FOR ML	NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn
DEEP LEARNING	Pytorch, Tensorflow
BIG DATA	SQL, NoSQL, Spark, Hadoop, Kafka
OTHER	Crawling, Linux, Docker, Git, LaTeX

Languages

ENGLISH:	**107 TOEFL** R30 L26 S26 W25 (expired) ✹ **326 GRE** Q167 V159 ✹
PERSIAN & KURDISH:	Mother tongue