Ainaz Jamshidi

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EDUCATION

University of Maryland Baltimore County, Maryland, USA
PhD in Computer Science , September 2023-2028 GPA: 4.0
Department: Information Systems

Koç University, Istanbul, Turkey
Master of Computer Science, September 2018-2021 GPA: 3.83
Department: Computer Science and Engineering
Advisor: Professor. Baris Akgun

AmirKabir University of Technology, Tehran, Iran
Bachelor of Electrical Engineering, 2013-2017 GPA: 3.80
Department: Bio-Medical Engineering, Bio-Electrics
Advisor: Professor. Golnaz Baghdadi

Fateh High School, Mashhad, Iran
High-school Diploma in Mathematics and physics, 2009-2013 GPA: 4.0
National Organization for the Development of Exceptional Talent (NODET)

RESEARCH & TEACHING EXPERIENCES

Teacher Assistant **UMBC**
September 2023-present Maryland, USA
Foundation of Data Science

Research Assistant **Koç University**
Sep 2021 - 2023 Istanbul, Turkey

- Applying online and offline RL algorithms in the context of autonomous driving, specifically lane change studies with visual and kinematic data
- Developing and employing off policy evaluation methods

Machine Learning Engineer (Internship, Remote) **CareX**
Nov 2021 - March 2022 Silicon Valley, USA

- Designed a pipeline to extract PPG signals from the videos recorded from the finger tip by smart phones' camera.
- Designed and implemented Machine learning pipelines for blood pressure estimation using Pytorch and Keras.

Private Tutoring (Remote) **HUB21**
September 2021 - 2023 London, UK
Delivered +400 hours of private tutoring in introductory Python programming, Advanced Python programming, Algorithm and complexity.

Teacher Assistant **Koç University**
September 2018 - 2023 Istanbul, Turkey
Artificial intelligence and Machine learning, Data structure, Advanced Python programming.

Data Scientist (Part-time, Remote) **Atiyeh Clinical Neuroscience Center**
2017 - 2019 Tehran, Iran

- Designed and implemented a pipeline for denoising EEG signals based on ICA algorithm using Matlab and WinEEG.

- Designed and implemented a new two back task with positive and negative feedback in c# programming language. This implementation was employed, by the clinic, in their studies for a long time. (2017)

Data Scientist (Internship) **Atiyeh Clinical Neuroscience Center**
June 2016 - September 2016 Tehran, Iran

- Pre-processing & processing bio signals, specially EEG signal, and extracting signal components and useful information using Matlab and WinEEG.
- Research on cognitive neuroscience, designing and programming cognitive tasks.

PAPERS

- **Ainaz Jamshidi***, Barış Akgün. Learning Autonomous Discretionary Lane Change Based on Offline Reinforcement Learning. (Under Review)
- **Ainaz Jamshidi***, Barış Akgün. "Operator Decision Aid Design via Multi-Dimensional Time-Series Event Prediction: A Hydrocracking Unit Application". (Under Review)
- Golnaz Baghdadi*, Ali Doustmohammadi, **Ainaz Jamshidi**, Farzad Towhidkhah. "Prediction of the Root Causes of Attention Deficit Disorder Symptoms Using Petri Net Modeling Approach". (2020)
- **Ainaz Jamshidi***, Golnaz Baghdadi. "The effect of negative and positive feedbacks on N200 & P300 ERP components recorded under Visual two-back Continuous Performance Test on normal participants". (2018)
- **Ainaz Jamshidi***, Golnaz Baghdadi. "The effect of positive and negative feedback on working memory performance: Mathematical Modelling". (2017)

SELECTED ACADEMIC PROJECTS

- Generation of High Quality Synthetic Phonocardiogram Signals Using Generative Adversarial Networks and Diffusion Models. (2023)
- Bio-signal processing course project: Addressing PCG Heart Murmur Detection from Audio Saliency Prediction Perspective. (2022-2023)
- M.Sc. Thesis: "Multi-Dimensional Time-Series Highly Rare Event Prediction: A Hydrocraking Unit Application", Supervisor: prof. Barış Akgün. (2021)
- Independent Study: "Flow from motion: A Deep Learning Approach" (2018)
- Preparing a technical literature survey in predictive maintenance domain (predicting remaining useful life and breakdowns in advance via data driven and machine learning and deep learning approaches). (2018)
- B.Sc. Final Project: "Representing a mathematical model that demonstrates differences of the effect of positive and negative feedback on short-term memory", (the steps that have been taken are designing a two-back task test in c#, processing of 25 EEG signal data with Matlab and extracting Erps related to the effect of both feedbacks.), Supervisor: Dr. Golnaz Baghdadi. (2017)
- Microprocessor Course Project: Programming an AVR microcontroller for two users can play X-O Game, Dr. Farshad Almasganj (Ph.D.). (2016)
- Introduction to biomedical Engineering project: Deliberation diffusion characteristics in "corpus callosum" with the aid of DTI image processing, Dr. Nasiraei (Ph.D.). (2014)

HONORS

• Offered Senior Data Scientist Role at Trendyol (The largest online shopping platform in Turkey). (2023)
• Awarded the KUSIS AI scholarship at Koc University. (2022)
• Kaggle Expert, received 1 silver and 8 bronze medals. (2021)
• Ranked 5th among bachelor students of Amirkabir university. (2017)
• Honored with the special prize of academic morality matters. (Amirkabir university - 2016)

- Exceptional talent award from Amirkabir University. (2015)
- Top 0.1% of participants in the nationwide university entrance exam. (2013)

COMPUTER SKILLS

Matlab (EEGlab toolbox, Simulink,...), **Python**, Keras, Pytorch, Tensorflow, R (Studio), SQL, HTML, CSS, Java script, Kotlin, Swift, PSpice/Orcad, Spss, LTspice, Altium Designer, Proteus, LaTeX, Git.

RELEVANT COURSE WORK

Design Algorithm & Complexity, Introduction to Machine Learning, Deep Learning, Introduction to Reinforcement learning, Computer Vision with Deep Learning, Autonomous Driving, Medical Image Analysis, Advanced Artificial Intelligence, Signals & System, Bio signal processing, Adaptive signal processing, DSP, etc.