MAZYAR TAGHAVI

arxiv◇ GitHub ◇ Google Scholar ◇ Research Gate
Phone: (+98) 936-970-8353 ◇ Email: mazyartaghavi@gmail.com

EDUCATION

Two master's degree:

Iran University of Science and Technology (IUST) ***July 2025***
M.Sc. in Applied Mathematics (Optimization)
Related courses: Advanced Linear Programming, Advanced Non-Linear Programming, Optimal Control, Machine Learning, Mathematical Modelling, Advanced Numerical Analysis.
Thesis: Optimization in Deep Reinforcement Learning.

PNU University ***April 2023***
M.Eng. in Computer Engineering (Artificial Intelligence and Robotics)
Related courses: Algorithms design, Advanced Artificial Intelligence and Robotics, Machine Learning, Artificial Neural Networks, Deep Learning, Digital Signal Processing, Image Processing, Speech Processing.
Thesis: Autonomous Medical Care for Space Travelers Using Deep Reinforcement Learning.

RESEARCH INTERESTS

Distributed AI: Multi-Agent Reinforcement Learning (MARL), Autonomous Systems, Control.
Deep Learning: Deep RL; Image, Video, Audio, and Data Processing.
Optimization: Optimal Control, Quantum Optimization

SKILLS

Research report tools	LaTeX, Microsoft visio, Simago graphica
Programming Languages	Python, Cirq, Qiskit
Machine Learning Tools	PyTorch, TensorFlow, keras
Robotics and Computer Vision tools	Open CV, Open AI Gym, Brax, MuJoCo, SLAM, ROS
Optimization softwares	GAMS, Gurobi, CPLEX
Mathematical Skills	Mathematical foundations of AI/ML

RESEARCH EXPERIENCE

Research intern Feb 2021 - 2023
Supervisor: Prof. Nezam Mahdavi_Amiri Iranian Operations Research Society (IORS)

· Deep Reinforcement Learning

AI for people Feb 2021 - April 2023
Supervisor: Prof. Saeed Ayat PNU University Research Center

· Persian Language handwritten recognition and voice recognition with artificial neural networks (ANNs) for illiterate elderly individuals- My task: Implementing quantum ML algorithms

RESEARCH EXPERIENCE

Teaching Assistant (certified) Sep 2021 - April 2023
Supervisor: Prof. Saeed Ayat PNU

· Machine Learning
· AI

PUBLICATIONS

1- (In progress) Quantum Reinforcement Learning for Continuous Action Space and Multi-Agent Systems: A Survey of Algorithms and Research

2- Autonomous Medical Care for Space Travelers Using Deep Learning and Reinforcement Learning

3- Safe, Reliable, and explainable Multi-Agent Reinforcement Learning: Optimal Control in Autonomous Robotics

4- Quantum Calculus of Variations and Quantum Optimal Control

5- Using a Quantum Artificial Intelligence Technique in Deforestation Diagnostics

6- A Model for Reliability Optimization of Series System

7- Solving a large scale model by Dantzig-Wolfe decomposition algorithm

8- Aircraft's evaluation for purchasing decision-making using fuzzy MCDM

9- Autonomous Medical Care for Space Travelers Using Deep Learning and Reinforcement Learning

10- Quantum-Assisted Optimization for Advanced 3-D Imaging with Deep Learning: A Case Study of Image-Based Cancer Diagnostics

11- Quantum Max-Cut Classifier, A Quantum Artificial Intelligence Technique; Application in Cancer Diagnosis

12- Application of unsupervised artificial neural network (ANN) self-organizing map (SOM) in identifying main car sales factors

13- Applying FMCDM in Prioritizing Effective Factors in portfolio selection strategy – Tehran stock exchange

14- Middle-level management involvement in strategy process and organizational performance

ONLINE COURSES

Advanced Reinforcement Learning	*Udemy & Coursera*
Mathematics for Machine Learning and Data Science	*Coursera*
Probabilistic Graphical Models	*Coursera*
Linear Algebra	*Imperial College London*
Quantum Computing	*Coursera & St. Petersburg University*

STANDARDIZED TESTS

ibt TOEFL 2023	*93 out of 120*
GRE general 2024	*297*

ACADEMIC REFERENCES

Professor Samaneh Mashhadi (She/her)
professor Saeed Ayat (He/him)
Professor Javad Vahidi (He/him)