Tehran

Iran

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Amir Pouya Moeini

Education

2014–2018 Diploma, Iran Atomic Energy High school .

2018–present BSc. Computer Engineering, Sharif University of Technology - SUT.

2020-present Minor. Mathematics, Sharif University of Technology - SUT.

Honors

2017 **Gold Medal**, in National Olympiad Astronomy and Astrophysics,
By winning this medal, I was able to select any university and any major I want to.

2017-present Member of, Iran's National Elites Foundation.

2018 **Official member of 12th team of IRAN**, in International Olympiad Astronomy and Astrophysics (IOAA in Beijing - China), which earned <u>First</u> place..

2018 Gold Medal, in International Astronomy and Astrophysics Olympiad (China - Beijing).

Research Interests

Academic Research Interests.

- Statistical and Theoretical Machine Learning
- High Dimensional Statistics
- Meta Learning
- Federated Learning
- Information Theory

Academic Teaching Experience

Machine Learning (Graduate) , Dr. Rohban - winter 2021

Statistical Machine Learning (Graduate), Prof. Rabiee - winter 2021

Machine Learning , Dr. Hosseini - spring 2021

Regression Analysis , Prof. Zangeneh - spring 2021

Artificial Intelligence, Dr. Rohban - spring 2021

Linear Algebra, Prof. Rabiee - fall 2020-21

Linear Algebra, Dr. Motahari - winter 2020

Probabilities and Statistics , Dr. Omidvar - winter 2020

Data Structures and Algorithms , Dr. Seddighin - fall 2020-21

Probabilities and Statistics , Dr. Sharifi - fall 2020-21

Advanced Programming - winter 2020

Academic Research Experience

June2020-Now

June2020- Undergraduate Research Assistant @DML

Sharif University of Technology, Tehran

Under supervision of Professor Hamid R Rabiee - Social Media, Multimedia Systems

Projects

Fall 2020-21 **DML Laboratory**, Privacy VS Personalization: A Fair Private Meta-Learning Approach for Distributed Data Personalization and user Profiling.

under supervision of Prof Hamid R Rabiee

We aim to to design a Meta Learning (PML) approach for personalization (user-profiling) while maintaining the required level of accuracy and Privacy in the Federated Learning Context.

For more details: please visit here here

Fall 2020-21 **DML Laboratory**, Fake news Detection and Mitigation.

under supervision of Prof Hamid R Rabiee

Try to find next batch of infected users in a social network using Representation Learning and Reinforcement Learning and vaccine future infected users to mitigate fake news spread. For mere details: please visit here

Summer 2019 Member of Iranian National Observatory Project.

under supervision of Habib Khosroshahi

Calculating the Seeing of the sky with some image processing algorithms (Automatically and Manually), Thus the main telescope will have the situation of the weather and can decide is the weather appropriate for the observation or not.

Related Courses

Courses Related to my Research Interests.

- Theory of Machine Learning (Graduate Course) Prof. Mohammad Ali Maddah-Ali (Fall 2020) -My talk and project: here
- Bayesian Methods in Statistics and Machine Learning (Graduate Course) Dr. Kasra Alishahi (Fall 2020) My talk and project: here
- High Dimensional Probabilities (Graduate Course) Dr. Mohammad Hossein Yassaee (Winter 2021)
- Artificial Intelligence Dr. Mahdiyeh Soleymani (Fall 2020)
- Stochastic Process Dr. Mostafa Esfahani Zadeh (Winter 2021)
- Applied Linear Algebra Dr. Motjaba Tefagh (Winter 2021)
- o Information Retrieval Dr. Mahdiyeh Soleymani (Fall 2020)
- o Linear Algebra Dr. Abolfazl Motahari (Fall 2019)
- Probability and statistic Dr. Ali Sharifi Zarchi (Fall 2019)
- Data Structures and Algorithms Dr. Mahdi Safarnejad (Winter 2020)
- o Design Algorithms Dr. Massoud Seddighin (Winter 2021)
- o Machine Learning (Graduate Course Audited) Dr. Mahdiyeh Soleymani
- Deep Learning (Graduate Course Audited) Dr. Mahdiyeh Soleymani
- Reinforcement Learning (Graduate Course Audited) Dr. Kasra Alishahi
- o Information Theory (Graduate Course Audited) Dr. Mahtab Mirmohseni
- Introduction to Blockchain (Graduate Course Audited) Dr. Maddah-Ali
- o Convex Optimization (Graduate Course Audited) Dr. Motjaba Tefagh

Small Projects

GANs project: Some implementation of GANs papers. You can see the codes here. Classification project: Some implementation of Classification papers. codes: here.

DataDays Website: Frontend part of this event website. codes: here. Reddit Website: Web course project. You can see the codes here.

Duelyst Game: Advanced Programming course project. You can see the codes here.

Academic Activities

Sharif Data Days 2020: Technical and Exec Staff

WSS (Winter seminar series) 2021: Member of the Content team

Sharif Data Days 2021: Member of the Scientific team

Computer Skills

Languages

Programming Python (Advanced), R(Advanced), JavaScript(Advanced), Java(Advanced), C, Matlab

Libraries Python: Pytorch(Advanced), Django(Advanced), NetworkX, Tensorflow

Javascript: React(Advanced), Redux, Node

Languages

Persian Native

English Intermediate

Work Experience

2017–2020 **Olympiad Instructor**.

Topics I have taught so far:

 Classical Mechanics, Astrophysics, Cosmology and General relativity, Spherical Astronomy, Special relativity, Data analysis

Places I've worked so far:

o Iran Atomic Energy High school, Salam High school, Allame Tabatabei, Farzanegan2

References

Prof. Hamid Reza Rabiee.

Professor, Sharif University of Technology, Computer Engineering Department rabiee@sharif.edu

Dr. Massoud Seddighin.

Lecturer, Sharif University of Technology, Computer Engineering Department mseddighin@ce.sharif.edu seddighin.masood@gmail.com