

Amirhossein Mesbah

GRADUATE STUDENT · RESEARCH ASSISTANT

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Education

University of Tehran

Tehran, Iran

M.Sc. IN ARTIFICIAL INTELLIGENCE AND ROBOTICS

2020 (Sep) - 2023 (Sep)

- Thesis: Subgoal Discovery using Subspaces and a Free Energy Paradigm
- Supervisors: Dr. Nili Ahmadabadi, Dr. Hosseini
- Advisor: Dr. Shariatpanahi
- Overall GPA: 19.48/20 (4/4)

University of Tabriz

Tabriz, Iran

B.S. IN COMPUTER ENGINEERING

2016 (Sep) - 2020 (Jul)

- Overall GPA: 18.23/20 (3.79/4)

Research Interests

Reinforcement Learning

Theory of Machine Learning

Representation Learning

Research Experience

Research Assistant

Tehran, Iran

COGNITIVE SYSTEMS LAB, UNIVERSITY OF TEHRAN

2020 (Nov) - present

- Work on different Reinforcement Learning projects (Social RL and Hierarchical RL).

Publications

Subgoal Discovery Using a Free Energy Paradigm and State Aggregations

Reinforcement Learning

A.Mesbah, R.HOSSEINI, P.SHARIATPANAHI, M.NILI

2023

- Preparing to submit (Draft Link). Soon to be on Arxiv.

Who to Learn from: A Preference-based Method for Social Reinforcement Learning

Reinforcement Learning

B.KARIMIAN, *E.MIRZAEI, *A.Mesbah, R.HOSSEINI, P.SHARIATPANAHI, M.NILI (* EQUAL CONTRIBUTION)

2022

- submitted to IEEE Transactions on Cognitive and Developmental Systems (TCDS). (Link)

Teaching Assistance Experience

Volunteer Teaching Assistant for Graduate Courses

University of Tehran

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING, COLLEGE OF ENGINEERING, UNIVERSITY OF TEHRAN, TEHRAN, IRAN

2021 (Sep) - 2023 (July)

- TA of advanced courses like Advanced Deep Learning, Interactive Learning, Machine Learning, and Data Analytics.

Volunteer Teaching Assistant for Reinforcement Learning course

Sharif University of Technology

COMPUTER ENGINEERING DEPARTMENT, SHARIF UNIVERSITY OF TECHNOLOGY, TEHRAN, IRAN

2023 (Feb) - 2023 (May)

- Collaborating in designing theoretical problems for homework of the hierarchical RL and Offline RL section.

Skills

Theoretical Experience

Statistical Machine learning, Reinforcement Learning, Deep Learning, Design of Algorithms and Databases

Programming & Scripting

Python, SQL, HTML, CSS, JavaScript, Matlab, C, C++ and Java and \LaTeX

Libraries and Frameworks

PyTorch, Tensorflow, Keras, Numpy, Scipy, Scikit-learn, Pandas, BeautifulSoup, NLTK, Opencv, Django and Scrapy

Projects

Reinforcement Learning (Link)

- Desinging personalized environments, Simulation of multi-agent RL and deep RL agents and multi-armed bandit algorithms.

Deep Learning & Machine Learning (Link)

- Simulation of federated learning algorithms, transformers, and machine learning algorithms.

Languages

English - TOEFL IBT (overall of 103 - R:30, L:28, S:21, W:24)	Fluent
Persian	Native
Turkish	Native