

Education

- 2018 **National Physics Olympiad Gold Medal**, *Tehran, Iran*,
Recognized as one of the **top 0.01%** students, (Top 10 out of approximately 100,000 participants nationwide).
- 2018–2019 **Young Scholar's Club**, *Tehran, Iran*,
Preparing for International Physics Olympiad (IPHO).
- 2019–2025 **Sharif University of Technology**, *Tehran, Iran*,
Computer Engineering, Bachelor of Technology
GPA – 3.41/4.00.

Publications

PreND: Enhancing Intrinsic Motivation in Reinforcement Learning through Pre-trained Network Distillation, (*First Author*),
Accepted at Neurips IMOL workshop, **Arxiv Link**.
TLDR; PreND enhances intrinsic motivation in RL by using pre-trained representations to improve the stability and quality of intrinsic rewards, indicating promising results against traditional RND in Atari experiments.

Research Interests

- Deep Reinforcement Learning
- Unsupervised Representation Learning
- Sequential Decision Making
- Vision Language Models

Research Experience

- Sep 2023 – ongoing **Integrating Intrinsic Motivation to Enhance Generalization in Goal-Conditioned Reinforcement Learning**, Supervisor: Dr. Soleymani Baghshah, Tehran, Iran.

I worked on improving the generalization of goal-conditioned policies in reinforcement learning by developing advanced techniques that allow models to perform effectively across diverse and unseen tasks. My research focused on integrating intrinsic motivation mechanisms to enhance exploration and learning efficiency, enabling agents to pursue novel goals and adapt to dynamic environments. Additionally, I applied representation learning methods to capture essential features of the environment, which improved decision-making and policy performance.

- Oct 2023 – ongoing **Important News Detection using LLMs and Advanced Tuning Techniques**, Supervisor: Dr. Jafari Siavoshani, Tehran, Iran.

I focused on detecting important news using large language models (LLMs) by leveraging decoder-based architectures to accurately identify and prioritize significant events. My work involved instruction tuning, where I fine-tuned models to follow specific guidelines for news detection, ensuring more precise and relevant outputs. Additionally, I employed prompt engineering techniques to optimize model inputs, enhancing the quality and reliability of the generated results.

Honors and Awards

- May 2019 **Asian Physics Olympiad**, *Australia*.
○ Certificate of Appreciation
- Sep 2018 **National Physics Olympiad**, *Iran*.
○ Gold medal

Academic Services

- Jun 2024 **Sharif University of Technology**, *Tehran, Iran*.
○ Vice President of **Sharif Software Seminar Series (S4)**

Working Experience

- Feb 2021– **Data Scientist, Artificial Intelligence Expert**, TAPSI, A ride hailing company akin to UBER in Iran.
- July 2023
- **Reinforcement Learning**: Designed Ride campaigns based on Reinforcement Learning feedback for drivers.
 - **Large Language Models**: Developed a First-Version Chatbot, helping to gradually replace the traditional Call-center team.
 - **Classic Machine Learning**: Formulated a CATBOOST CLASSIFIER to detect the fraudulent drivers.
 - **Visualisation**: Identified and visualized the valuable drivers to the system by using K-means and T-SNE clustering.
 - **Deep Learning**: Implemented a CNN and VAE to predict the future passengers' activities.
 - **Classic Machine Learning**: Utilized a Xgboost model to predict the drivers' ride count in the forthcoming days.

Computer Skills

- Programming Language (Python, Java)
- Machine Learning (Pytorch, Sklearn)
- Reinforcement Learning (Gym, OpenCV)
- Big Data (Pyspark, Pandas, Seaborn, Matplotlib)

Teaching Experience

Teaching Assistant at Sharif University of Technology (All of them were voluntary), Tehran, Iran.

- Machine Learning
- Deep Learning
- Natural Language Processing
- Probability and Statistics

Languages

- English: TOEFL score: 98
 - Reading: 28
 - Listening: 26
 - Speaking: 23
 - Writing: 21
- German: CEFR A1
- Persian: Native