Kiana Asgari

Curriculum Vitae

Department of Mathematical Science
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Research Interests

Reinforcement Learning.

High dimensional Probability.

Bandit.

Education

Sharif University of Technology, Double-Major — Tehran, Iran
B.Sc. in Computer Science — 2018–Current
B.Sc. in Mathematical Science
GPA: 19.10/20.00

Farzanegan High School (NODET). — Zanjan, Iran
Diploma in Mathematics and Physics — 2014–2018
Affiliated with Iran national organization for development of exceptional talents

Relevant Courses

- Information Theory in Statistical Learning (Graduate Course) — ongoing
  presented by Dr. Yassaee
- Machine Learning Theory(Graduate Course) — 20/20
  presented by Dr. Maddahali
- Deep Learning(Graduate Course) — 18.6/20
  presented by Dr. Beigy
- High Dimensional Probability(Graduate Course) — 19.7/20
  presented by Dr. Yassaee
- Convex Optimization(Graduate Course) — 20/20
  presented by Dr. Tefagh
- Introduction to Cryptography(Graduate Course) — 20/20
  presented by Dr. Khazai
- Analysis of Algorithms — 20/20
  presented by Dr. Alimi
- Data Structures — 18.7/20
  presented by Dr. Alimi
- Advanced Programming — 20/20
  presented by Dr. Boomeri
- Linear Algebra — 18.7/20
  presented by Dr. Akbari
- Mathematical Analysis 1&2 — 20/20
  presented by Dr. Moghadasi

Research Experience

Reward Shaping -Reinforcement learning agents point of view — 16 Feb. - 16 Aug. 2023
Max Plank Institute for software system internship program.
implementing reward shaping benchmark -will be public after the end of the program
Supervisor: Adish Singla

Reinforcement learning in Blockchain — Ongoing
Bachelor Thesis.
Supervisor: Dr. Tefagh

Bayesian Neural Networks for deep learning users Spring 2021
Based on Work of LAURENT VALENTIN JOSPIN
Supervisors: Dr. Beigy, Dr. Yassaee

Agnostic Federated Learning fall 2020
Based on Work of Mohri et al.
Supervisor: Dr. MaddahAli

How to Construct constant-Round Zero-Knowledge Proof System for NP Summer 2020
Based on Work of O. Goldreich, A. Kahan.
Supervisor: Dr. khazai.

Cartan Subalgebras in Dimension Drop Algebras Summer 2020
Based on Work of Dr. Sven Raum.
Supervisor: Dr. Raum.

Projects

- Bayesian Neural Network (Spring 2021)
  Implementing BNN based on Variational inference with Pytorch
- LP Solver (Spring 2020)
  Implementing LP Barrier Method with infeasible start Newton Method using DCP programming
- Chicken Invaders Simulation (Summer 2019)
  Implementing Multiplayer Game with Java Socket Programming
- Gas Simulation (fall 2018)
  Simulation of gas molecules collision using Java Swing

Teaching Experiences

Teaching Assistant, Applied Linear Algebra , Dr. Tefagh Spring 2021
(Applications of Linear Algebra in Machine Learning)

Teaching Assistant, Probability and Applications , Dr. Barzegar Fall 2020

Skills

- **Programming Languages:** Java, Python, MATLAB, C++.
- **Python Libraries:** NumPy, Pytorch, TensorFlow, Socket.
- **Non Linear Programming:** Disciplined Convex Programming (DCP)
- **Data Base:** MySql.
- **Document preparation:** LaTeX, Microsoft Office.

Languages

- **Persian:** native
- **English:** fluent

Honors

- Attending **CMMRS** school at Max Planck Institute (MPI) Summer 2021
- **University Entrance Examination (Konkur)** 2018
  Ranked 217 among more than 200,000 participants (top 0.1 %) in Undergraduate Mathematical University Entrance Exam.
- Member of Iran's National Elites Foundation (INEF)