

Parsa Saadatpanah

SOFTWARE ENGINEER · MACHINE LEARNING RESEARCHER

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USA Legal Permanent Resident (Green Card holder)

Education

University of Maryland

College Park, MD

PH.D. IN COMPUTER SCIENCE

2015 - PRESENT

- GPA: 4/4, Working on Machine Learning and Optimization

Sharif University of Technology

Tehran, Iran

B.S. IN SOFTWARE ENGINEERING

2011 - 2015

In-Major GPA: 19.42/20

Skills & Relevant Coursework

Programming Languages Python, Java, C++, C, MATLAB

Machine Learning Technologies TensorFlow, CUDA

Web Technologies HTML, CSS, JavaScript, jQuery, Django

Database Technologies SQL

RELEVANT COURSEWORK

Natural Language Processing(A), Machine Learning(A⁺), Reinforcement Learning(A), Computer Vision(A⁺), Advanced Numerical Optimization(Current), Neural Modeling(Current)

Work & Leadership Experience

Graduate Research Assistant

College Park, MD

UNIVERSITY OF MARYLAND

2017 - Present

Graduate Teaching Assistant

College Park, MD

UNIVERSITY OF MARYLAND

2015 - 2016

Intern

Singapore, Singapore

NATIONAL UNIVERSITY OF SINGAPORE

2013

Teaching Assistant

Tehran, Iran

SHARIF UNIVERSITY OF TECHNOLOGY

2013 - 2015

CEO and Co-Founder

Tehran, Iran

MAPA EDUCATIONAL CENTER

2011 - 2015

MAPA ensures every student has access to quality preparation for the national Olympiad competitions. Our tutoring services are contracted to the government, who then utilize our tutors in their public schools. We also work directly with the private school system.

Honors & Awards

2015 **Dean's Fellowship**, University of Maryland Dean's Fellowship

College Park, MD

2014 **Ranked First**, University Students' Olympiad in Computer Engineering

Tehran, Iran

2011 **Outstanding Student**, Sharif University of Technology

Tehran, Iran

2010 **Gold Medal**, National Olympiad in Informatics

Tehran, Iran

2010-2015 **Grant for Undergraduate Studies**, from National Elites Foundation

Tehran, Iran

2010 **National Scientific Elite**, Acknowledged by National Elites Foundation

Tehran, Iran

2008 **First Place Winner**, High School Students Computer Programming Contest

Tehran, Iran

Research Experience

Inverse Reinforcement Learning with sub-optimal expert data

College Park, MD

Being able to understand what is the reward function that an expert is trying to optimize allows us to learn the best policy. But experts are not necessarily optimal. Our research goal was to learn the reward function, based on multiple sub-optimal expert trajectories.

Variance Reduction for Kacsmarz methods

College Park, MD

Kacsmarz methods are very popular optimization methods but they are prone to non existence of optimal solution and noise in the data. My research focused on utilizing Variance Reduction algorithms to make Kacsmarz methods more robust.

Interaction Conflicts

Tehran, Iran

Having several systems working autonomously in an environment can lead to conflict situations which should be dealt with in some way. We studied these situations and conflict management methods, and did a user study on how the system should react to these situations.

Flip-Flop: Convex Hull Construction via Star-Shaped Polyhedron in 3D

Singapore, Singapore

Flipping is a local and efficient operation to construct the convex hull in an incremental fashion. However, it is known that the traditional flip algorithm is not able to compute the convex hull when applied to a polyhedron in R^3 . The novel Flip-Flop algorithm we developed is a variant of the flip algorithm. It overcomes the deficiency of the traditional algorithm to always compute the convex hull of a given star-shaped polyhedron with provable correctness.