

SHAYAN PARDIS

Computer Science Undergraduate Student at MIT

 [shayan-p.github.io](https://github.com/shayan-p)

 Shayans-P

 [shayan-pardis](#)

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EDUCATION

Bachelor of Computer Science and Engineering

MIT (transfer)

GPA: 5.0/5.0

 Sep 2022 – May 2025


 Cambridge, Massachusetts

Related Courses:

- Analysis and Design of Algorithms
- Introduction to Inference
- Computation Structures
- Software Construction

Sharif University of Technology

GPA: 19.51/20

 Oct 2020 – June 2022

 Tehran, Iran

Related Courses:

- Engineering Probability and Statistics
- Programming Language Design
- Artificial Intelligence
- Advanced Programming

WORK EXPERIENCE

Google Summer of Code Contributor

Julia Language Organization

CUDA.jl

Julia

 June 2023 – now

 Remote

Developing GPU acceleration support for [QuantumClifford.jl](#), a Julia package designed for Quantum Stabilizer circuits ([details](#)).

Robotics Research Experience

MIT Biomimetics Lab (led by Sangbae Kim)

Matlab

C++

 Feb 2023 – now

 Cambridge, Massachusetts

Significantly improved the throughput (4x) of the Humanoid Robot's QP-based controller by parallelizing the computation.

Geometric Algorithm Design Internship

SIMCON

CGAL

C++

 Sep 2021 – March 2022

 Wuersele, Germany

Designed and implemented an algorithm converting 3D Mesh into simplified skeleton Graph with substantial accuracy improvement.

Data Science Internship

Carriot

Elastic-Search

Scikit-Learn

Python

 July 2021 – Sep 2021

 Tehran, Iran

Designed and developed a model to parse addresses and find the corresponding locations with OSM (geocoding problem). Tuned Elastic Search engine to store and retrieve the OSM data.

Web Developer (Part-Time)

Abarkelas

JS (Nuxt)

Python (Django)

 Oct 2020 – June 2021

 Tehran, Iran

Developed both backend and frontend using Django and NuxtJs. Set up Prometheus and Grafana for monitoring. Turned the website to PWA (Progressive Web Application).

ACHIEVEMENTS



ICPC 2021 World Finalist

1st place regional ACM-ICPC team, advanced to the World Finals



Gold Medal. IOI 2020

Ranked 10th in 32th International Olympiad in Informatics, Singapore



Gold Medal. INOI 2019

Ranked 1st in Iran National Olympiad in Informatics



Silver Medal. APIO 2020

Ranked 24th in Asia-Pacific Informatics Olympiad 2020, Indonesia

PROJECTS



FaceExplore

 June 2022 – now

React

Python

Created FaceExplore, a face search engine utilizing MTCNN, Resnet, and Clustering for face detection in a large image gallery with unsupervised learning techniques. Developed a website using React, Flask, Nginx, and Docker for the user interface.



Sharif AI Challenge

 March 2021 - May 2021

Python

Developed (as a team) an AI agent for a distributed game that ranked 4th in the competition. Used Huffman-code for cost-efficient communication and A* algorithm for shortest path detection over a not-fully-explored map.



Interactive Music System Project

 Sep 2022 - Dec 2022

Python

Developed (as a team) a sandbox game inspired by the physics of light that allows players to generate creative music.



Simple Python Interpreter

 March 2022

Racket

Developed (as a team) a simplified Python interpreter with Racket. I added support for lazy evaluation and static type-checking.



AlgoBase

 2021 – 2022

C++

The collection of Algorithms that my team implemented for the ICPC competition.

TEACHING POSITIONS

INOI Algorithm Course Coordinator

Iranian National Olympiad in Informatics Summer Camp

📅 July 2021 – Aug 2021

📍 Tehran, Iran

Organized and invited guest lecturers while also serving as a course instructor. Member of the scientific committee and designed 3 out of 9 questions for the final exams.

LA: Natural Language and Computation (6.S051)

Professor Robert Berwick

📅 Sep 2022 – Dec 2022

📍 Cambridge, Massachusetts

Revised and created new lab practices covering the topics: Segmentation, Parsers (CKY, Earley), Semantic Parsing with Lambda Calculus, and Grammar Inference (inside-outside algorithm).

REFERENCES

Available Upon Request

VOLUNTEERING

🌐 Website for QML seminar

📅 Feb 2022

📍 Tehran, Iran

Developed a website for a seminar in Quantum Machine Learning using React, Docker, and Nginx. Used Material-UI for design.

🌐 Graph Theory Book

📅 2019 – 2020

📍 Tehran, Iran

Started and Contributed in writing an [Online Graph Theory book](#) that helps many students learn Graph Theory in an algorithmic approach. The book is written in Persian.