

Soheil Hemmat

Date of Birth: June 20th 2004 | *Nationality:* Iran

Contact: [Email](#) | [Website](#) | [LinkedIn](#)

EDUCATION

B.Sc. in **Computer Science** 2022 – Present

Shahed University, Tehran, Iran

Ranked **1st** in Cohort

GPA (Last 2 years): **18.92 / 20 or 3.92/4**

GPA (Overall): **18.2 / 20 or 3.66/4**

B.Sc. Thesis (Ongoing): “*Mostar index applied to some new graphs*” Supervisor: [Dr. Ardeshir Dolati](#)

RESEARCH INTERESTS

- HCI
- Wearables
- Computer Vision
- AI
- VR/XR/AR
- Optimization

SELECTED RESEARCH AND ACADEMIC PROJECTS

- 2025–2026** ■ **B.Sc. Thesis** — “*Mostar index applied to some new graphs*” (Under Revision) — Supervisor: [Dr. Dolati](#)
*Preparing submission to **Communications in Combinatorics and Optimization (CCO)**(co-first author)*
- Investigating the Mostar index for kite, wheel, and inflated graphs; proving formulas
 - Implementing computational validation in Python and releasing reproducible code and figures
 - Writing the thesis in LaTeX, presenting findings, and refining proofs based on feedback
- 2025** ■ **Research on AI Regulation in Europe** — Supervisor: [Dr. Hajiani](#) (Narrative ; submitted; First Author)
*Submitted to the **Journal of Technology Development Management (JTDM)***
- Synthesized EU AI Act governance, GDPR interfaces, and FRIA obligations
 - Extracted policy takeaways and insights relevant for AI regulation frameworks
- 2025** ■ **AI Capstone — Recommender Systems (ALS, SVD, LightGCN), MovieLens-100K** ([GitHub](#)):
- Implemented & benchmarked models in Python/PyTorch
 - built evaluation pipeline (RMSE/MAE/P@5/R@5) and reproducible [code](#)
- 2024** ■ **Research Collaboration on Support Vector Machines** — Supervisor: [Dr. Seyed Javadi](#)
- Collaborated with a team on initial experiments and data analysis for SVM research
- 2024** ■ **Two-Way Gödel Mapper:**
- Encoded/decoded register-machine programs via Gödel numbering
- 2024** ■ **Designed Client&Server Program by Suckt Programing** ([GitHub](#)):
- Designed and implemented a Client-Server terminal messenger using TCP sockets
 - Implemented asynchronous message handling with multithreading
- 2024** ■ **Mini Compiler in C** ([GitHub](#)):
- Built a lexer & LALR(1) parser with operator precedence; handled identifiers/numbers/loops
- 2024** ■ **Estimating Functions using Genetic Algorithm** ([GitHub](#)):
- Developed a tree-based genetic algorithm in Python to approximate mathematical functions.
 - Applied the model to predict house prices using MSE for evaluation

COMPUTER SKILL

Programming Languages: Python, C++, Spss,
Latex, MySQL, HTML, CSS, Jupyter

Technical Skills: GitHub, Graphiz, CNC
General: Microsoft Office

WORKING EXPERIENCE

Spring 2025	Teaching Assistant, Operating Systems (Supervised by Dr. Purbahman) <ul style="list-style-type: none">Designed and evaluated ExercisesSolved students' problems
Spring 2025	Teaching Assistant, Digital Design (Supervised by Dr. Farhadian) <ul style="list-style-type: none">Conducted tutorial sessionsDesigned and evaluated exercises and circuitsAssisted students with problem-solving
Spring 2025	Substitute Lecturer, Compiler Course (Supervised by Dr. Seyed Javadi) <ul style="list-style-type: none">Delivered a one-time lecture on computational complexity and compiler design while the regular instructor was unavailable.Addressed student questions and clarified complex concepts
Fall 2024	Head Teaching Assistant, Basis of Theory of Computation (Supervised by Dr. AliAbdi) <ul style="list-style-type: none">Managed the teamConducted tutorial sessionsAssisted in grading midterm exams and problem-solving
Spring 2024	Teaching Assistant, Abstract Matrix and Linear Algebra (Supervised by Dr. Nasr) <ul style="list-style-type: none">Conducted tutorial sessionsDesigned ExercisesAssisted students with problem-solving
2023-Summer	Education Mentor at Hamrah Aval Academy <ul style="list-style-type: none">Mentored top-performing students in the 'Keyboard' program by MCI Academy.Provided guidance and support to help students improve problem-solving and learning.Designed and supervised exercises in Python, including algorithmic and ML problems

Patents

Precision Measurement Tool for Large O-Rings (>200 mm)— *Second Inventor*:

Conducted computational calibration for the accurate measurement of large, flexible O-rings, and for developing a tool that integrates mechanical design.

Nationally registered in Iran, [Patent No. 112589](#)

Spring 2025

QUALIFIES & CERTIFICATES

An Introduction to NLP , Amirkabir University of Technology (Credited)	Fall 2023
Federated Learning 2.0 , Amirkabir University of Technology (Credited)	Fall 2023
Lectures on Modern Topics in Applied Mathematics , University of Tehran (Credited)	Fall 2024
Media Skills and Information Warfare in Noisy Cyberspace , Shahed University (Credited)	Fall 2025

HONORS & AWARDS

2025	Recognized as an Exceptional Talent for achieving 1 st rank in cohort, Shahed University (Credited)
2025	Ranked among the top 5% of all B.Sc. students , Shahed University
2024	Ranked in ICPC Asia Tehran Regional Contest using Python, Shahed University (Credited)
2024	Ranked 2nd in the Local Programming Championship using Python, Shahed University

LANGUAGES

Farsi: Native **English:** Fluent ([6.5](#) in IELTS: S: 6.5, W: 6.5, L: 7.5, R: 6) **Arabic:** Basic **Japanese:** Basic

REFERENCES

[Dr. Ardeshtir Dolati](#), Associate Professor
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[Dr. Hesam Sharifi](#), Associate Professor
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