Asha SOROUSHPOOR
Bachelor of Computer Science

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FIELDS OF INTEREST

> Software Verification
> Mathematical Logic
> Graphics
> Quantum Computing

EDUCATION

2023	**Algebra, Logic & Category in Computer workshop (ACLiC)**, DEmoS Institute, France
2018 - 2023	**Bachelor of Science, Computer Science**, University of Tehran, Current GPA : 16.9/20
2014 - 2018	**High School Diploma, Mathematics and Physics**, National Organization for Development of Exceptional Talents (Sampad), Allameh Helli 5, GPA : 19.21/20

TEACHING AND MENTORING

February 2023 – July 2023

Teaching Assistant of Dr. A. Nadi, DEPARTMENT OF MSCS, University of Tehran
> Assembly & Machine Language
> I lectured parts of the course mainly about FPU, SIMD instructions, CPU cache, and system calls.
> I was head Teaching assistant supervising another 5 teaching assistants with more than 50 students enrolled in the course.
> I designed a new project for the course regarding develop a text editor using assembly
> With the help of my team we developed a portable Judge Server for midterm exams and exercises.

`x86 Assembly` `Machine Language` `Programming`

February 2022 – July 2022

Teaching Assistant of Prof. Mojtaba Mojtahedi, DEPARTMENT OF MSCS, University of Tehran
> Intro. to computation Theory

`Regular Languages` `Finite State Machines` `NFA` `CFG` `PDA` `Turing Machine`

September 2022 – February 2023

Teaching Assistant of Prof. Mojtaba Mojtahedi, DEPARTMENT OF MSCS, University of Tehran
> Compilers
> As a TA for the Compilers course I was assigned to guide students step by step towards developing the COOL compiler.

`COOL Compiler` `Compilers` `Syntax Analysis`

September 2021 – February 2022

Teaching Assistant of Prof. Bagher BabaAli, DEPARTMENT OF MSCS, University of Tehran
> Data Structure and Algorithm
> My main job as a teaching assistant in this course was to design exercises and develop test generators for each excercise for the judge.

`Data Structure` `C++` `Algorithms`

EXPERIENCE

2018 - 2019	Junior freelance Game Designer and Developer in RasGames Branches, , RaS Games

`Teamwork` `Unity` `Game Design` `Game Development`

2021	Junior Front-End Web Developer, , Asha ERP
	> Internship and junior front-end Web Developer in Asha-ERP Company.

`React` `Team Work` `Front End Web Development`

2016 - 2021 | **Social Services, , Zaroastrian Students Association**
- KDZ is an NGO that I was part of for several years.
- I did participate in the Scientific conference and Manthra (a congress focused on philosophy and humanitarian research).
- I started several debate competitions on topics such as Ethics in A.I. and Social studies.
- I also founded an annual round-table Discussion congress about social studying and Futurology named BlindSpot.

LeaderShip | TeamWork | Workplace Politics | Crisis Handling

</> Skills

Programming/Scripting	Python, C/C++, C#, Java, x86 Assembly, R, HTML5, CSS
Frameworks/IDEs	Jupyter, Visual Studio Code, Code Blocks
Proof Assistants & Formal Methods Tools	Coq, NuSmv, SPIN, Alloy
Documentation	LaTeX, Microsoft Office
Theoritical Skills	Language Theory, Theory of Computations, Classic logic, IPC, Modal logic, Type Theory

✚ Related Taken Courses

- Non-classical Logics - *GPA : 18/20*
- Fundamentals of Logic - *GPA : 15.5/20*
- Machine Language and Assembly - *GPA : 19/20*
- Compilers - *GPA : 20/20*
- Theory of Computation - *GPA : 15.8/20*
- Formal Methods in Software Engineering - *GPA : 18.4/20*
- Graph Theory and Applications - *GPA : 19.59/20*
- Deep Learning (as "Topics in Computer science - *GPA : 16.41/20*
- Fundamental of Mathematics - *GPA : 16/20*
- General Biology - *GPA : 20/20*
- Design & Understanding of Algorithms- *GPA : 17.5/20*
- Artificial Intelligence - *GPA : 19/20*
- Logical Programming - *GPA : 17.5/20*

☰ Languages

Farsi ●●●●●
English ●●●●○

- TOEFL 11/2023 - *105/120*
- Reading - *26/30*
- Listening - *29/30*
- Speaking - *23/30*
- Writing - *27/30*

🖥 Projects and Researches

Into the Quantum Realm : On the Collapsible Polynomial Hierarchy for Promise Problems   2024

🔗 Lecture
Advanced Algorithm Course

Quantum Computing | Complexity Theory

Formalization of Maehara's proof of Interpolation Theorem in CPC & IPC using Coq proof Assistant   2022 - 2023

🔗 Bachelor Thesis Project
Proving interpolation theorem in classical propositional logic and intuitionistic propositional logic by induction on the length of the proof tree in Coq, *failed attempts archive*

Logic | Coq | Proof Assistants | IPC

COOL Compiler   2022

🔗 COOL Language Website
Compilers Course

Compilers | C | Language Theory

Basic OS modules Based on xv6   2021

Basic OS modules and socket programming.

OS | C

Assembler & Disassembler in x86 Assembly   2023

🔗 Assembler   🔗 DisAssembler
Assembly and machine language Course

x86 Assembly | Linux

BMP Image Brightner in x86 Assembly   2023
[↗] Image Brightner
Assembly and machine language Course

`x86 Assembly` `Linux`

Convertor of Pahlavi transliteration to Zorastrian middle Persian script   2021
[↗] https://www.parsigdatabase.com/

`Python`