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# Soroush HAJ ZARGARBASHI

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Isfahan, Iran | 30 March 1995  
ADDRESS: Isfahan University of Technology, Isfahan, Iran  
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## RESEARCH INTERESTS

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- **Theoretical Computer Science:** Algorithms and Data Structures, Complexity Theory, Approximation Algorithms
- **Bioinformatics:** System Biology, Computational Biology
- **High Performance Computing:** Parallel Programming, Designing Parallel Algorithms, Distributed Computing
- **Mathematics:** Graph Theory, Algebraic Graph Theory, Game Theory, Combinatorics, Linear Algebra

## EDUCATION

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2014 - Current Bachelor of Science in COMPUTER ENGINEERING,  
**Isfahan University of Tech**, Isfahan, Iran  
Major: Software Engineering

2014 Diploma in Physics and Mathematics Discipline  
Isfahan, Iran  
GPA: 19.6/20

## WORK EXPERIENCE

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| <i>Current</i><br>AUG 2016 | Research Assistant<br>MEDICAL IMAGE AND SIGNAL PROCESSING RESEARCH CENTER (MISP)<br>Isfahan University of Medical Science<br><i>Feature Extraction Using Graph Principles on Genetic Experimental Results to Predict Breast Cancer</i><br>Our research consists of topics: Graph Theory, Data Mining, Clustering and Classification, Programming and ...                                |
| MAY-AUG 2016<br>Internship | Intern at <b>MISP Research Center</b><br>Our work was focused on studying, documenting and research on following topics: <ul style="list-style-type: none"><li>• Microarray Data Analysis</li><li>• Multiple Sequence Alignment Problem, In the aspects of complexity and approximation algorithms</li><li>• Providing environment for distributed programing on MISP Center.</li></ul> |

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| Membership | <ul style="list-style-type: none"> <li>• Medical Image and Signal Processing Research Center</li> <li>• Department of Advanced Technologies in Medicine, Bioinformatics Research Lab (Under supervision of Dr. M. Sehhati)</li> <li>• Isfahan University of Tech, ACM Student Chapter (Vise Chair)</li> <li>• Isfahan Mathematics House</li> </ul> |
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## HONORS AND AWARDS

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| ACM ICPC | <ul style="list-style-type: none"> <li>• Ranked 9th Place in 39th ACM-ICPC West Asia Regionals (Tehran Site)</li> <li>• Ranked 19th Place in 38th ACM-ICPC West Asia Regionals (Tehran Site)</li> </ul>                                                                                                                                                                                                                                     |
| IEEE     | <ul style="list-style-type: none"> <li>• Ranked in the top 6% among 2477 teams in international <b>IEEEExtreme 9.0</b></li> </ul>                                                                                                                                                                                                                                                                                                           |
| Other    | <ul style="list-style-type: none"> <li>• Ranked in the top 3% among about 800 teams in the 1st Sharif Code Cup (2016)</li> <li>• Ranked 5th in Sharif Java Challenge (2015)</li> <li>• Ranked 9th in National Programming Contest (Amirkabir University of Tech)</li> <li>• Ranked 4th in 14th Kharazmi Festivals (2012 - High School)</li> <li>• Ranked in Top 30 Iranian teams in the Tournament of Towns (2012 - High School)</li> </ul> |

## TEACHING AND PRESENTATION EXPERIENCE

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| Lab Instructor      | <ul style="list-style-type: none"> <li>• Advanced Programming - Isfahan University of Tech (2015 - 2016)</li> </ul>                                                                                                                                                                                              |
| Teacher's Assistant | <ul style="list-style-type: none"> <li>• Algorithm Design - Isfahan University of Tech (2016)</li> </ul>                                                                                                                                                                                                         |
| Presentations       | <ul style="list-style-type: none"> <li>• <b>Introduction to Game Theory</b><br/>Isfahan Mathematics House</li> <li>• <b>Parallel Processing Intro</b><br/>Isfahan Mathematics House</li> <li>• <b>Big Data Processing using Map-Reduce in Hadoop</b><br/>Isfahan University of Tech - Data Base Class</li> </ul> |
| Instructor          | <ul style="list-style-type: none"> <li>• Introduction to Competitive Programming - IUT Spring 2016</li> </ul>                                                                                                                                                                                                    |

## RELEVANT COURSES

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- Introduction to Programming
- Advanced Programming

- Data Structures
- Algorithm Design
- Game Theory (Math Department)
- Automata Theory
- Operating Systems

## Been Audience in

- Advanced Graphs (Graduate Course)
- Computational Complexity (Graduate Course)

## SKILLS

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|                                 |                                                            |
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| Programming Languages:          | C++ , C , Python , R                                       |
| Mathematical Libraries:         | Sage, NetworkX                                             |
| Bioinformatics Libraries:       | BioConductor                                               |
| HPC Libraries:                  | OpenMP, Nvidia CUDA, MPICH2 (MPI)                          |
| Type Setting / Word Processing: | L <sup>A</sup> T <sub>E</sub> X, Beamer , Microsoft Office |
| Operating Systems:              | Linux, Microsoft Windows                                   |

## LANGUAGES

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| ENGLISH: | Fluent          |
| PERSIAN: | Mothertongue    |
| ARABIC:  | Basic Knowledge |