Mohamad Assari

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mohamad-assari.github.io GitHub LinkedIn

Education

Double Major Student in Computer Engineering and Physics

B.Sc. in Computer Engineering
Amirkabir University of Technology (Tehran Polytechnic), Iran **2014-present**
GPA: 3.70/4.00 (**17.27**/20) (100 units)

B.Sc. in Physics
Amirkabir University of Technology (Tehran Polytechnic), Iran **2014-2019**
GPA: **3.78**/4.00 **(17.85/20)** (141 units)

High School Diploma in Mathematics & Physics
NODET(Tizhushan) Beheshti high school Rey, Tehran, Iran **2010-2014**
GPA: **19.25**/20

Research Interests

Algorithms
Complexity Theory
Graph Theory
Parallel/Distributed Computing
Quantum Information

Honors and Accomplishments

Ranked **1st** in second semester and **2nd** in Cumulative GPA among all undergraduate students in Physics Department, Amirkabir University of Technology (Tehran Polytechnic), Iran - 2019

Granted permission to double major in any field **fully funded** due to having a GPA of more than 17/20 for all first four semesters - 2016

Admitted to study Physics **fully funded** at Amirkabir University of Technology due to outstanding performance in the National Entrance Examination for Iranian Universities, **Mathematics and Engineering** – 2014

Ranked Top **2%** in the National Entrance Examination for Iranian Universities, **Foreign Languages** - 2014

Passed **27 units** in one semester with **GPA of 18.61/20** - 2018

Scored **830/990** in **Physics subject GRE** test - September 2018

Accepted in entrance exam of NODET(National Organization for Development of Exceptional Talents) high schools - 2010

Accepted in entrance exam of NODET(National Organization for Development of Exceptional Talents) junior high schools - 2007

Selected Courses

Computer Engineering courses:

Algorithm Design The only student who scored full mark in this course	**20**/20
Operating Systems	**19.9**/20
Application of Artificial Intelligence	**17.93**/20
Principles of Database Design	**16.2**/20
Engineering Statistics	**19.25**/20
Applied Linear Algebra	**16.31**/20
Software Engineering I	**18.60**/20
Theory of Machines & Languages	**16.5**/20
Research Method & Report Writings	**19**/20
Technical English	**18.58**/20
Math. II	**18**/20
Math. I	**19**/20
Engineering Mathematics	**16**/20
Advanced Computer programming	**16**/20
Principles of Computer & programming	**20**/20

Physics courses:

Modern Physics	**19.25**/20
Electromagnetism(I)	**18**/20
Laser Physics	**20**/20
Optics	**19**/20
Bio Physics	**17**/20
Acoustics	**19.5**/20
Project Physics	**20**/20

Math. Physics(III)	**17**/20
Specialized English Physics	**19.5**/20
Solid State Physics	**18**/20
Thermodynamics & Statistical Physics(II)	**20**/20
Analytical Mechanics(II)	**19.71**/20
Analytical Mechanics(I)	**20**/20
Astronomy & Astrophysics	**20**/20

Teaching Assistant

Algorithm Design - 2019
Amirkabir University of Technology, Under Supervision of Prof. Bourbour

Research Experience

Research & Development Engineer at Mivanet Company
Topics: Graph sampling from distance matrices using Spanning trees(minimum spanning tree, maximum spanning tree, …) and visualization of average shortest path, closeness centrality and betweenness centrality in these graphs The project was developed using some python libraries such as networkx, numpy and graphviz. Click to visit - May 2019 to Present

Computer Skills

Languages: Python, Java, C & C++, SQL

Typesetting: Latex, LibreOffice, Microsoft Word

Operating Systems: Linux (Manjaro, Ubuntu), Windows

Languages

Persian: Mother Tongue (Native)
English: Full Professional Proficiency (Fluent)
TOEFL iBT (November 2, 2018): **95**/120
(Reading: 26, Listening 23, Speaking 24, Writing 22)
Arabic: Basic

Selected Class Projects (click to visit)

Algorithm Design: Implementation of Travelling salesman problem using both nearest neighbor algorithm and Exhaustive algorithm also comparing their complexities

Algorithm Design: Devising an efficient dynamic programming algorithm that finds optimal solution of a **Dynamic Programming** problem

Artificial Intelligence: Solving Sliding Puzzle problem using A*, BFS, Bilateral, DFS and Uniform cost algorithms also comparing their complexities

Artificial Intelligence: Devising a genetic algorithm for regression of third degree polynomial

Data Structures: Implementation of a text query using BST, TST and Trie That can also take logical phrases as input

Advanced Programming: Implementation of XO game using Automata

Advanced Programming: Design and Implementation of Pac-Man game using multithreading

Theory of Machines & Languages: Implementation of DFA to detect whether or not a string belongs to regular languages

Theory of Machines & Languages: changing NDFA to DFA

References

- **Ahmad Nickabadi, Assistant Professor**:
  email: nickabadi@aut.ac.ir
  Computer Engineering and IT Department, Amirkabir University of Technology

- **Sara Bourbour Hosseinbeigi, Visiting Professor**:
  email: sbourbou@mymail.mines.edu
  Computer Engineering and IT Department, Amirkabir University of Technology

- **Hamidreza Habibiyan, Assistant Professor**:
  email: habibiyan@aut.ac.ir
  Energy Engineering and Physics Department, Amirkabir University of Technology

- **Houshyar Noshad, Associate Professor**:
  email: hnoshad@aut.ac.ir
  Energy Engineering and Physics Department, Amirkabir University of Technology