



Mohamad Assari



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GitHub

[Linked in](#)

Education

Double Major Student in Computer Engineering and Physics

B.Sc. in Computer Engineering

[Amirkabir University of Technology \(Tehran Polytechnic\)](#), Iran 2016-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	20/20
The only student who scored full mark in this course	
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:**
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[Computer Engineering and IT Department](#), Amirkabir University of Technology
- **Sara Bourbour Hosseinbeigi, Visiting Professor:**
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- **Hamidreza Habibiyan, Assistant Professor:**
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