

Ali Mortazavi

CONTACT INFORMATION

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EDUCATION

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
B.Sc. Computer Software Engineering, 2013 – 2017
CGPA: **Overall** 18.47 / 20 (3.78/4) [Ranked 3rd]
Selected Course 19.33 / 20 (4/4)

RESEARCH INTERESTS

- Statistical Machine Learning
- Optimization
- Sequential Prediction
- Mechanism Design in Game Theory

RESEARCH EXPERIENCE

Implementation and Evaluation of "Genetic" and "Simulated Annealing" Algorithms for Extended Travelling Salesman Problem, B.Sc. Thesis, [\[code\]](#) [\[report\]](#)

Under the supervision of [Dr. Razazi](#) at Amirkabir University of Technology

In this project, we tested the performance of two different heuristic approaches to solve an NP-Complete Problem. This problem is an extended version of the Travelling Salesman Problem. Since our approach is heuristic, there is no guaranty to find a global optimum answer. Therefore, we needed some other exact approach for computing the global optimum. For this purpose, we reduced our problem to an Integer Linear Programming Instance. So in small graph samples, we could compare our results with the optimum solution and for the large graph samples, we just compared our two different methods with each other.

HONORS AND AWARDS

- **Ranked 3rd** (out of 100) in term of Cumulative GPA among students of computer engineering of 2013 Entrance 2017
- Awarded as Outstanding Student in Amirkabir University of Technology 2015-2017
- Awarded direct admission to M.Sc. program in **Artificial Intelligence** at *Amirkabir University of Technology* as Talented Undergraduate Student 2017
- **Ranked 19th** in the Final Stage in **National Scientific Olympiad** of Computer Engineering 2016
- Qualified in the Selection Exam of **National Scientific Olympiad** of Computer Engineering 2016
Qualified as 9th among the students in all the Universities in the Tehran Region
- **Ranked 1st** in Mathematics Team Selection Exam 2015
- **Ranked Top 0.8%** In The Country-wide University Entrance Exam 2013

ACADEMIC PROJECTS

Image Denoising and Segmentation Using Markov Random Field [\[code\]](#)[\[report\]](#)
Optimizing Energy Function using Simulated Annealing, Comparing different Color Spaces results.
Text Summarization [\[code\]](#)[\[report\]](#)
Extracting important sentences as a summary using page rank algorithm and word2vec.
Text Classification [\[code\]](#)[\[report\]](#)
Using different metrics (mutual information, information gain, etc.) for extracting important words for document classification task.

TEACHING EXPERIENCE

- Probability and Statistics**, Teaching Assistant
Under Supervision of [Prof. Amirhaeri](#) (haeri@aut.ac.ir)
spring 2018
- Special Class for Olympiad Preparation**, Instructor
Intro. To Theory of Computation, Algorithm Design
spring 2017 and 2018
- Algorithm Design**, Teaching Assistant
Under Supervision of [Prof. Rahmati](#) (zrahmati@aut.ac.ir)
spring 2017
- Algorithm Design**, Teaching Assistant
Under Supervision of [Prof. Mousavi](#) (srm@aut.ac.ir)
spring 2016

HIGHLIGHTED COURSES

- Probability and Statistics

20/20

Data Structures

20/20
- Stochastic Processes

20/20

Algorithm Design

20/20
- Data Mining

19/20

Advanced Topics in Algorithms

20/20
- Artificial Intelligence

20/20

Theory of Computation

20/20
- Data Storage and Retrieval

20/20

Engineering Mathematics

20/20
- Audited Statistical Machine Learning and Probabilistic Graphical Models

ATTENDED CONFERENCES AND SEMINARS

- Deep Learning Summer School at University of Tehran**
August 2018
An introduction to Deep Learning and different research Areas.
- Block Chain and Cryptocurrency**
February 2018
An introduction to Block Chain Mechanism and different Cryptocurrency systems. By [Prof. Hatami](#) and [Prof. Salavati](#)
- Journal Club at IPM**
August 2017 - October 2017
Weekly seminars in Cognitive Science hosted by [Prof. Abbasian](#)
- Workshop on Game Theory**
February 2017
An introduction by [Prof. Salavati](#) to Game Theory Concepts (Nash Equilibrium, Expected Pay off, Repeated Games, Auctions, etc.)

SKILLS

- Theoretical Skills**
Mathematics, Probability and Statistics, Algorithms
- Technical Skills**
Python (NumPy, Scikit, NLTK), Java, C/C++

TALKS

- A brief summary to The Theory of Computation**
May 2018
- What is Natural Language Processing**
May 2017
- Can computers have emotion?**
June 2016

LANGUAGES

- Persian**: Native
- English**: TOEFL: **99** (Reading: 23, Listening: 28, Speaking: 23, Writing: 25)
GRE General: **317** (Quantitative: 167, Verbal: 150, Writing: 3.0)

OTHER ACTIVITIES

- Piano**
2018
Recently I have [started](#) to learn piano.
- Citywide Amirkabir Programming Contest Staff**
2016
Member of problem designing team.
- Basketball Team Member**
2015
Ranked 4th in the Amirkabir University of Technology Basketball Cup with the Computer Engineering Team