Ali Mortazavi

CONTACT
INFORMATION

Dept. of Computer Eng. & IT,
Amirkabir University of Technology,
Hafez St., Tehran, Iran.

Email: ali_mortazavi@aut.ac.ir
Home: https://alimorty.github.io
Tel: (+98) 937 146-2838

EDUCATION

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran

B.Sc. Computer Software Engineering, 2013 – 2017
CGPA: Overall $\quad$ **18.47 / 20 (3.78/4)** [Ranked **3rd**]
$\qquad$ Selected Course $\quad$ **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 $\hfill$ 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 $\hfill$ 2017
- **Ranked 19th** in the Final Stage in **National Scientific Olympiad** of Computer Engineering $\hfill$ 2016
- Qualified in the Selection Exam of **National Scientific Olympiad** of Computer Engineering $\hfill$ 2016
  Qualified as 9th among the students in all the Universities in the Tehran Region
- **Ranked 1st** in Mathematics Team Selection Exam $\hfill$ 2015
- **Ranked Top 0.8%** In The Country-wide University Entrance Exam $\hfill$ 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 sentence 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	spring 2018
	Under Supervision of Prof. Amirhaeri (haeri@aut.ac.ir)	
	• **Special Class for Olympiad Preparation**, Instructor	spring 2017 and 2018
	Intro. To Theory of Computation, Algorithm Design	
	• **Algorithm Design**, Teaching Assistant	spring 2017
	Under Supervision of Prof. Rahmati (zrahmati@aut.ac.ir)	
	• **Algorithm Design**, Teaching Assistant	spring 2016
	Under Supervision of Prof. Mousavi (srm@aut.ac.ir)	

HIGHLIGHTED COURSES

- Probability and Statistics   20/20
- Statistical Machine Learning   20/20
- Probabilistic Graphical Models   17/20
- Stochastic Processes   20/20
- Data Mining   19/20
- Data Storage and Retrieval   20/20
- Data Structures   20/20
- Algorithm Design   20/20
- Advanced Topics in Algorithm Design 20/20
- Theory of Computation   20/20
- Artificial Intelligence   20/20

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 Dr. Hatami and Dr. Salavati	
	• **Workshop on Game Theory**	February 2017
	An introduction by Dr. 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)

OTHER ACTIVITIES	• **Piano**	2018
	Recently I have started to learn piano.	
	• **Amirkabir Programming League Staff**	2016
	I was member of problem setting team.	
	• **Basketball**	2015
	Member of Basketball team in Computer Engineering Department.	