

Reza Tavasoli

CONTACT INFORMATION

Computer Eng. and IT Dept.
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RESEARCH INTERESTS

- Computer Vision
- Machine Learning
- Computer Networking
- Wireless Networking

EDUCATION

- **Amirkabir University of Technology (Tehran Polytechnic)**, Tehran, Iran
(Ranked 2nd among all Iranian universities based on QS World University Rankings 2021)
B.Sc., Computer Engineering, September 2016 - Present
Last Two Years' GPA: **17.55/20 (3.81/4)**
Overall GPA: **16.69/20 (3.5/4)**
- **Danesh High School**, Tehran, Iran
Diploma in Mathematics and Physics 2012 - 2016
Overall GPA: **19.68/20**

RELEVANT COURSEWORK

- **Algorithm Design** (19.25/20)
- **Engineering Statistics** (18.05/20)
- **Artificial Intelligence** (19.32/20)
- **Database Design** (18.1/20)
- **Computer Networks** (19.6/20)
- **Cloud Computing** (18.83/20)
- **Software Engineering** (18/20)
- **Multimedia Systems** (17/20)

TEACHING EXPERIENCE

Amirkabir University of Technology, Tehran, Iran
Teaching Assistant

- Algorithm Design, Instructors: Prof. Alireza Bagheri (Fall 2020)
- Computer Networks, Instructor: Prof. Masoud Sabaei (Spring 2020)
- Database Design, Instructor: Prof. Saeede Momtazi (Fall 2020)
- Microprocessors and Assembly Language, Instructor: Prof. Hamed Farbeh (Fall 2020, Spring 2020, Fall 2019)
- Computer Architecture, Instructor: Prof. Hamed Farbeh (Spring 2020, Fall 2019)

RESEARCH EXPERIENCE

Research Assistant, Amirkabir University of Technology (April 2020 - Present)
Building a web application to detect dental cysts from dental radiography images using computer vision to help patients with dental problems. Supervisor: Prof. Hamed Farbeh

WORK EXPERIENCE

- **Freelance Mobile Application Developer** (2019 - Present)
Building open-source mobile apps with Flutter (Available on Github)
- **Database Developer Intern** (June - August 2019)
Worked as an intern on SQL Server database (University Course)

HONORS AND REWARDS

- Featured mobile application built with Flutter Framework that was showcased on Flutter Weekly, 2020.
- Achieved top **0.4%** place among all applicants of the Nationwide University Entrance Exam for B.Sc. in Engineering (Approximately 160000 applicants), Iran, 2016.
- Achieved top **0.5%** place among all applicants of the Nationwide University Entrance Exam for B.Sc. in English (Approximately 115000 applicants), Iran, 2016.

SKILLS

- **Programming Languages:**
Python, Dart, Java, Swift, C++
- **Database Systems:**
PostgreSQL, SQL Server, MySQL
- **Mobile Application Development:**
Flutter, iOS
- **Miscellaneous:**
OpenCV, Bash Script, Git, L^AT_EX
- **AI and Data Science:**
Tensorflow, Numpy, Matplotlib, Pandas
- **Web Development:**
HTML, CSS, Bootstrap, Django

SELECTED PROJECTS

- **Malaria Detection from Blood Cell Images**
Implemented a system to detect Malaria from thin blood slide images.
Github Link: github.com/tavasolireza/CNN-Malaria-Detection
- **Landscape Images Colorization**
Implemented a system to colorize black-and-white landscape images.
Github Link: github.com/tavasolireza/Landscape-Images-Colorization
- **Deep Sudoku Solver**
Implemented with OpenCV and Tensorflow, identifies a sudoku puzzle from the the provided image and solves it.
Github Link: github.com/tavasolireza/Deep-Sudoku-Solver
- **Travelling Salesman Problem**
Implemented for the Algorithm Design course.
Github Link: github.com/tavasolireza/Travelling-Salesman-Problem
- **Graph Node Coloring with Local Search Algorithms**
Assigning a color to each node (nodes are cities on a map), while each neighboring nodes have distinct colors.
Github Link: github.com/tavasolireza/Map-Coloring-AI-Project
- **Compiler in Python**
Built a Lexical Analyzer and a Bottom-Up LALR parser using Python's PLY library. Implemented for the Compiler Design course.
Github Link: github.com/tavasolireza/Compiler-Design

LANGUAGES

- **Persian** (Farsi): Native
- **English:** Fluent - **TOEFL iBT:** 113/120 (Reading: 28, Listening: 28, Speaking: 29, Writing: 28)

**GRE
GENERAL TEST**

- **Quantitative Reasoning:** 163
- **Verbal Reasoning:** 154
- **Analytical Writing:** 4.5

REFERENCES

- **Hamed Farbeh, Assistant Professor**
Computer Engineering and IT Department, Amirkabir University of Technology
Email: farbeh@aut.ac.ir
- **Alireza Bagheri, Associate Professor**
Computer Engineering and IT Department, Amirkabir University of Technology
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- **Saeede Momtazi, Assistant Professor**
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