

# CURRICULUM VITAE

## Mehdi Roudaki

Iran University of Science and Technology  
School of Computer Engineering

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### OBJECTIVE

- To obtain Ph.D. admission in my fields of interest at the Computer Science Department in an outstanding university.

### EDUCATION

- Sep. 2021 – Expected Jun. 2023 M.Sc. in Computer Engineering, Software  
*Iran University of Science and Technology, Tehran, Iran*
- Sep. 2016 – Feb. 2021 B.Sc. in Computer Engineering, Software  
*Azad University of West Tehran Branch, Tehran, Iran*  
Project: Industrial Services System in Iran  
Supervisor: Dr. Afshin Moraveji  
Total GPA: 3.3/4 - 62 courses  
**Last two years' GPA: 3.7/4 - 31 courses**

### SELECTED COURSES

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|-------------------------|---------|--|-------|
| ▪ Data Structure        | 20/20   | ▪ Advanced Programming                 | 20/20 |
| ▪ Software Engineering  | 19.5/20 | ▪ Computer Networks                    | 17/20 |
| ▪ AI and Expert Systems | 17/20   | ▪ Microprocessor and Assembly Language | 19/20 |
| ▪ Database              | 18/20   | ▪ Computer Architecture                | 17/20 |
| ▪ Computer Games Design | 19.5/20 | ▪ Programming Languages Design         | 20/20 |

### RESEARCH INTERESTS

- Distributed Systems
- Cloud Computing
- High Performance Computing
- Operating Systems
- Data Science
- Machine Learning
- Deep Learning

### TECHNICAL REPORTS

- **M. Roudaki** and A. Sarabi “Application of the Recommender Systems in Smart Aviation and Aircraft Operations.”
- **M. Roudaki** and A. Sarabi “Introduction to Decision Support Systems in Virtual Organizations Management.”
- **M. Roudaki** “Software Quality Assessment with Python and ANTLR.”
- **M. Roudaki** “Industrial Services System in Iran” B.Sc. Project.
- **M. Roudaki** and M. Biglari “Design and Implementation of Semi-Automated Indoor Drone, in preparation for RoboCup IranOpen 2018 International Robotic Competition.”

### RESEARCH EXPERIENCE

- Fall 2018 – Winter 2018 **Real Time Face Detection and Recognition using OpenCV and Dlib**  
Under Supervision of M. Mousavi and M. Biglari  
Robotic Research Lab, Azad University of West Tehran Branch, Tehran, Iran
- Fall 2018 – Winter 2018 **Real Time OCR using OpenCV and KNN**  
Under Supervision of M. Mousavi and M. Biglari  
Robotic Research Lab, Azad University of West Tehran Branch, Tehran, Iran

- Summer 2018 **Real Time Motion Detection using OpenCV**  
Under Supervision of M. Mousavi and M. Biglari  
Robotic Research Lab, Azad University of West Tehran Branch, Tehran, Iran

## HONORS

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- Sep. 2021 Entry to Iran University of Science and Technology.  
Top 2% among over 25,000 applicants of National Universities Entrance Exam.
- Apr. 2018 Participated in RoboCup IranOpen 2018 International Robotic Competition (UAV League) as a member of “R2Lab” team.
- Fall. 2018 Participated in ACM programming competitions as a C# developer of “Bots” team.

## LANGUAGES

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- Persian – Native
- English – Fluent

## ACADEMIC PROJECTS

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- Nov. 2021 – Dec. 2021 **Software Quality Assessment** – Python, ANTLR  
Assess Java object-oriented programs quality by evaluating design properties and metrics.
- Sep. 2021 – Oct. 2021 **Real Time Chat Application** – ASP.NET Core, SignalR, JavaScript  
Sends messages, creates groups and channels.
- May. 2021 – Jul. 2021 **Saloon Reservation API** – ASP.Net Core  
Based on Agile and TDD Development.
- Oct. 2020 – Dec. 2020 **Automated Test Generation** – Python, Genetic Algorithm, HDBSCAN and Decision Tree  
Finds faults in critical areas of code.
- Nov. 2020 – Dec. 2020 **Simplex Method Application** – Python  
Able to solve all simplex problems.
- Oct. 2020 – Dec 2020 **High Tension Power Substation Simulator** – ASP.NET Core, JavaScript, SQL  
Runs power substation maneuver, detects faults.
- Apr. 2020 – Aug 2020 **Industrial Services System Web API (B.Sc. Project)** – ASP.NET Core, SQL  
Connects customers to constructors.
- Jan. 2020 – Feb. 2020 **Automatic Door Opening System** – Node.js  
Uses a Raspberry PI to control doors automatically.
- Sep. 2019 – Oct. 2019 **Azad University of West Tehran Branch Health Web Application** – ASP.NET Core, SQL  
Registers student’s health information and calculates their BMI.
- Nov. 2017 – Dec. 2017 **Maze Finder** – C++  
Analyzes 2D maps to find the correct way and unreachable paths.
- Sep. 2017 – Mar. 2018 **UAV Ground Control Station** – C++, QT Creator, OpenCV, Dlib, KNN  
Connects to UAV over network, Face Recognizer, Motion Detector, OCR, etc.
- Sep. 2017 – Nov. 2017 **Intelligent Controllable Robot** – Arduino IDE and C#  
Uses Arduino Uno, Ultrasonic and Bluetooth Sensors and Camera  
Line Follower, Distance Analyzer and Best Route Finder

- Jul. 2017 – Aug 2017      **Circle and HSV Color Detector** – C++, QT Creator, OpenCV  
Adjustable circle radius and color.

## TECHNICAL SKILLS

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- Programming      *Experienced in:* C/C++, Python  
*Professional at:* C#, JavaScript  
*Familiar with:* Java, MATLAB
- Database      SQL
- Web      ASP.NET Core
- Operating Systems      Linux, Windows
- Software      Qt Creator, Visual Studio, IntelliJ PyCharm, IntelliJ IDEA, Arduino, Microsoft Office, Maple, VMware
- Others      OpenCV, ANTLR, Git

## REFERENCES

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- **Dr. Peyman Babaei**, Assistant Professor  
Department of Computer Engineering, Azad  
University of West Tehran Branch, Tehran, Iran  
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- **Dr. Venus Marza**, Senior Research Fellow  
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