

# Mohammad Robati Shirzad

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## RESEARCH INTERESTS

- Software Engineering / Verification
- Compilers / Programming Languages
- Distributed Systems

## EDUCATION

- **Amirkabir University of Technology** (Tehran Polytechnic), Tehran, Iran  
**B.Sc.**, Computer Engineering, Software/Networking  
*Sep 2017 - Sep 2021*  
GPA: 18.06 / 20
- **Dr. Hesabi State Exemplary High School**, Ahwaz, Iran  
Diploma in Mathematics and Physics  
*Sep 2012 - Sep 2016*  
GPA: 19.46 / 20

## HONORS AND AWARDS

- **Ranked in the top 0.5%** in the Nationwide University Entrance Exam for B.Sc
- **Ranked 1st** in the State Exemplary High Schools Entrance Exam, Ahwaz, Iran, 2012
- **Ranked 3rd** in SnappTrip programming contest (out of 1022 participants), 2020
- Announced as the **Outstanding Student**, Amirkabir University of Technology, Tehran, Iran, 2020

## TEACHING EXPERIENCES

- **Instructor, Web Design Fundamentals**, AUT, Summer 2019,  
*Teaching the course + Designing code exercises and the final project + evaluating grades*
- **Teaching Assistant, Advanced Programming**, AUT, Spring 2019  
Under the supervision of Prof. Amir Kalbasi  
*Designing the final project + evaluating grades*
- **Teaching Assistant, Principles of Compiler Design**, AUT, Fall 2019  
Under the supervision of Prof. Mohammad Reza Razzazi  
*Designing theoretical exercises + Teaching students how to use Python to build a compiler*
- **Teaching Assistant, Principles of Compiler Design**, AUT, Spring 2020  
Under the supervision of Prof. Saeedeh Momtazi  
*Coordinating the team + Designing a grammar for the project, Designing and grading assignments + Teaching students how to use Python to build a compiler*
- **Teaching Assistant, Principles of Database Design**, AUT, Spring 2020  
Under the supervision of Dr. Toktam Zoughi  
*Designing the final project + evaluating grades*
- **Teaching Assistant, Principles of Compiler Design**, AUT, Fall 2020  
Under the supervision of Prof. Mohammad Reza Razzazi  
*Coordinating the team + Designing a grammar for the project, designing and grading assignments + Teaching students how to use Python to build a compiler*
- **Teaching Assistant, Computational Intelligence**, AUT, Fall 2020  
Under the supervision of Prof. Mohammad Mehdi Ebadzadeh  
*Responsible for designing projects and exercises related to the Fuzzy Systems section.*

## WORK EXPERIENCES

- **Teaching Assistant, Signals And Systems, AUT,**  
*Fall 2020*

Under the supervision of Prof. Mehdi Rasti

*Responsible for designing Python / Matlab signal processing programming exercises and projects.*

## TOP WORK AND ACADEMIC COURSE PROJECTS

- **Utopia ( [utopiapp.ir](http://utopiapp.ir) )**

*Lead Front-End Developer*

*Spring 2020 -*

- **Compilers**

*4 different compilers for 4 different grammars*

*Spring and Fall 2019, Spring and Fall 2020*

*All with the use of Python and PLX library*

- **Full stack development of an E-Shop website**

*Leading a group of 3 people as scrum master to build a*

*e-shop website using NodeJS (during Software Engineering I course)*

- **Download Manager**

*Download Manager with multi-segment downloading option*

*using Java (during Advanced Programming course)*

- **Signal Processing**

▸ *Program determining gender of the person speaking*

▸ *Program to encode a message in a signal*

- **Games**

▸ *Remaking Mortal Kombat III with Unity*

▸ *Developing a multiplayer tank game using Java (during Advanced Programming course)*

- **Augmented Reality**

▸ *Spreading different carpets on the floor with AR for decoration purposes using Viro*

- **Artificial Intelligence**

▸ *Text classification with N-gram models*

▸ *Classification using FCM algorithm*

▸ *Solving few NP problems using evolutionary algorithms*

*all can be found at [\*\*here\*\*](#)*

## TECHNICAL SKILLS

- **Programming Languages**  
*Python, Javascript, Java, C, Racket, Go, C#*
- **Database Systems**  
*MongoDB, MySQL*
- **Operating Systems**  
*macOS, Linux (Kali/Ubuntu), Windows*
- **Web Development**  
*ReactJS, NodeJS, Django, HTML, CSS, Bootstrap*
- **Other**  
*Unity, PLX, GNS3, Boson Netsim*

## OTHER ACTIVITIES

- Jazz Piano Player, *Since 2010*

## LANGUAGES

- **Persian** (Native)
- **English** (Advanced - C1 / IELTS : 7.5)

## REFERENCES

- Mohammad Reza Razzazi, Professor  
Computer Engineering Department, Amirkabir  
University of Technology, [razzazi@aut.ac.ir](mailto:razzazi@aut.ac.ir)
- Mohammad Mehdi Ebadzadeh, Professor  
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- Saeedeh Momtazi, Assistant Professor  
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- Mehdi Rasti, Assistant Professor  
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- Amir Kalbasi, Assistant Professor  
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- Toktam Zoughi, PhD  
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