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# Borna Barahimi

## Research Interests

- AI, Machine Learning, and Deep Learning
- Health informatics and Diagnostic informatics
- Natural language processing
- Reinforcement learning and Multi-agent systems
- Bioinformatics and Computational Biology

## Education

2018–2022 **B.Sc. Computer Science**, *University of Tehran* (*us news ranking: 387*), Tehran, Iran, *CGPA: 3.55/4 (CGPA last four semester: 3.66/4)*.

## Language Proficiency

English **IELTS Band Score 8**  
Persian Native proficiency

## Publications

Amir Darijani, Aria Mostaejeran, Mohammad Reza Jamali, Aref Sayareh, Mohammad Javad Salehi, and **Borna Barahimi**. Fury 2d simulation team description paper 2016. **RoboCup 2016 Symposium and Competitions: Team Description Papers, Leipzig, Germany**, 7 2016. URL: [https://archive.robocup.info/Soccer/Simulation/2D/TDPs/RoboCup/2016/FURY\\_SS2D\\_RC2016\\_TDP.pdf](https://archive.robocup.info/Soccer/Simulation/2D/TDPs/RoboCup/2016/FURY_SS2D_RC2016_TDP.pdf).

Nader Zare, Mahtab Sarvmali, Omid Mehrabian, Amin Nikanjam, Seyed Hossein, Aref Sayareh Khasteh, Omid Amini, **Borna Barahimi**, Arshia Majidi, and Aria Mostajeran. Cyrus 2d simulation 2019. **RoboCup 2019**, 2019. URL: [http://archive.robocup.info/Soccer/Simulation/2D/TDPs/RoboCup/2019/CYRUS\\_SS2D\\_RC2019\\_TDP.pdf](http://archive.robocup.info/Soccer/Simulation/2D/TDPs/RoboCup/2019/CYRUS_SS2D_RC2019_TDP.pdf).

## Awards and Honors

- Second Place in *Tehran Mental Health Electronics Startup Weekend 2019*, University of Tehran
- First place in Soccer Simulation League in *RoboCup Asia-Pacific 2018*, Kish, Iran
- Rank 389 among 145,000 participants in *the Iranian university entrance exam 2018* for bachelor's degree

- Second Place in Soccer Simulation League in *NasirCup2017*, K. N. Toosi University of Technology
- Participant in Soccer Simulation League in *RoboCup2017*, Nagoya, Japan
- Winner of The Technical Challenge in Soccer Simulation League in *IranOpen2017*, Tehran, Iran
- First place in Soccer Simulation League in *ShirazOpen2016*, Shiraz University of Technology
- *Best New Team* in Soccer Simulation League in *RoboCup2016*, Leipzig, Germany

## Professional Experiences

- July 2019 **Backend Developer**, *VClinic*, Tehran, Iran.
- July 2021 My responsibility was designing MongoDB databases especially the ones related to electronic health record, creating API services, educating interns, on boarding of new members, interviewing, and more.
- Oct 2016 **Robotics Programmer**, *Atomic Energy High School*, Tehran, Iran.
- July 2019 I was responsible for designing and developing algorithms for simulated agents in order to make them behave properly in the simulated soccer field. We also used machine learning methods in some of our algorithms.

## Teaching Experiences

- Sep 2021 **Teacher Assistant**, *University of Tehran*, Tehran, Iran.  
Present Theory of Computation Course
- Aug 2020 **Teacher Assistant**, *Karyar College*, Tehran, Iran.  
Present I taught underprivileged students programming (Python, C, HTML, CSS).

## Volunteer Experiences

- Aug 2020 **Teacher Assistant Representative**, *Karyar College*, Tehran, Iran.  
Present I was responsible for holding TAs' meetings and participating in planning meetings to provide better technical education for students.
- May 2019 **Community Representative**, *Computer Science Academic Association, University of Tehran*, Tehran, Iran.

## Notable Projects

- Parkinson's disease detection** *Implementation of a classification model for detecting Parkinson's disease based on online handwriting records using self-supervised and transfer learning (in progress)*
- Clique Classifier** *Implementation of a classifier based on a grid-based clustering algorithm*
- Compiler Project** *Development of COOL programming language compiler*
- Suffix Tree** *Implementation of a tool for working with suffix trees*

## Skills

**Programming Languages** Python, C++, R,  $\text{\LaTeX}$ , Ruby, JavaScript, Bash

**Databases** SQL, MongoDB, Redis

**Web Development** Node.js, HTML5, CSS, Express.js, Docker, React.js, Ruby on Rails, JQuery, Web-pack

**Data Mining** numpy, pandas, scikit-learn, keras, TensorFlow

**Industry Knowledge** Agile Development, Object-Oriented Programming (OOP), Web Development, Model-View-Controller (MVC), REST API Development, Design Thinking

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## Selected Courses

- Biology Meets Programming: Bioinformatics for Beginners: Coursera
- Compiler: A+
- Statistical Methods: A
- Data Structures and Algorithms: A
- Advanced Programming: A
- Data Mining: A+
- Database Management Systems: A+
- General Biology: A
- Design and Analysis of Algorithms: A

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## References

**Mr. Nader Zare**, *Teacher/Team Leader*, Team Leader of Cyrus RoboCup Team.  
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