

# Kasra Darvish

Maryland, USA

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## Education

### Ph.D., Computer Science

*University of Maryland, Baltimore County*

- Advisor: Professor Cynthia Matuszek • Research: Socially Assistive Robotics
- GPA: 3.85/4.0

**Maryland, USA**

*2018-Present*

### B.Sc., Computer Science

*Shahid Beheshti University*

- GPA: 3.78/4.0 • Last 2 years GPA: 3.92/4.0

**Tehran, Iran**

*2013-2018*

## Technical Skills

### • Programming and Tools:

- Python, Java, C++, C
- PyTorch, OpenCV
- MATLAB, Prolog
- HTML, CSS, JavaScript
- $\text{\LaTeX}$ , Ipe
- Vim, Emacs, Docker

### • Operating Systems: Mac OS X, GNU/Linux

## Honors and Awards

### • Morgan Stanley scholarship recipient for doing research focused on Data Science

*University of Maryland, Baltimore County*

**Maryland, USA**

*2018-2019*

### • Ranked as top 1% among computer science students

*Shahid Beheshti University*

**Tehran, Iran**

*2018*

### • Selected as one of the top 5 students

*Nationwide Computer Science Olympiad*

**Iran**

*2017*

### • Exempted from M.Sc. university entrance exam as an exceptional-talent student

**Iran**

*2017*

### • Ranked as top 1% among more than 250,000 students

*National Universities Entrance Exam*

**Iran**

*2013*

## Notable Projects

- A Convolutional Neural Network (**CNN**) for gender and race detection based on face images in **Python**
- **Pedestrian Detection** using Support Vector Machine and Histogram of Oriented Gradients in **MATLAB**
- An adversarial **2D game** in **C++** with **minimax** algorithm for the agent
- A talk on **Principal Component Analysis (PCA) and Eigenface** at Shahid Beheshti University
- **Ball Mania**, a **2D game** developed in **C++** using its graphic library

- **The Chromatic Art Gallery Problem** for specific type of polygons
- **Genetic algorithm** to solve a modified version of the **maze problem** in which we have to put different shapes of pipes in each cell to convey the water from source to destination
- **Prolog** program to solve Einstein's riddle

## Research Experience

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|---|--|
| • <b>Research Assistant, Robotics and Machine Learning</b><br><i>University of Maryland, Baltimore County</i> | <b>Prof. Cynthia Matuszek</b><br><i>Feb. 2019 - Present</i>  |
| • <b>Research Assistant, Deep Learning</b><br><i>Shahid Beheshti University</i>                               | <b>Prof. Hadi Farahani</b><br><i>Nov. 2017 - May 2018</i>    |
| • <b>Research Assistant - Computational Geometry Laboratory</b><br><i>Shahid Beheshti University</i>          | <b>Prof. Farnaz Sheikhi</b><br><i>Feb. 2017 - May 2018</i>   |
| • <b>Disease detection by processing iris image</b><br><i>Shahid Beheshti University</i>                      | <b>Prof. Alireza Tavakoli</b><br><i>May 2017 - July 2017</i> |

## Teaching Experience

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| • <b>Teaching Assistant, Algorithms</b><br><i>University of Maryland, Baltimore County</i> | <b>Prof. Paul Burkhardt</b><br><i>Jan. 2019 - May 2019</i>       |
| • <b>Teaching Assistant, Algorithms</b><br><i>University of Maryland, Baltimore County</i> | <b>Prof. Christopher Marron</b><br><i>Sept. 2018 - Dec. 2018</i> |
| • <b>Teaching Assistant, Computational Geometry</b><br><i>Shahid Beheshti University</i>   | <b>Prof. Farnaz Sheikhi</b><br><i>Sept. 2017 - Jan. 2018</i>     |
| • <b>Teaching Assistant, Compiler Theory</b><br><i>Shahid Beheshti University</i>          | <b>Prof. Adel Hosseini</b><br><i>Sept. 2017 - Jan. 2018</i>      |
| • <b>Teaching Assistant, Automata Theory</b><br><i>Shahid Beheshti University</i>          | <b>Prof. Hadi Farahani</b><br><i>Feb. 2016 - July 2016</i>       |
| • <b>Teacher, Mathematics</b><br><i>Mahde Danesh High School</i>                           | <b>Tehran, Iran</b><br><i>2013 - 2016</i>                        |

## Memberships and Services

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|---|--|
| • <b>IOI Office Member</b><br><i>The 29th International Olympiad in Informatics</i>                             | <b>Tehran, Iran</b><br><i>Aug. 2017</i>              |
| • <b>Executive Director of "Pardazeh"</b><br><i>The Scientific Journal of Computer Science Association, SBU</i> | <b>Tehran, Iran</b><br><i>Sept. 2014 - Nov. 2015</i> |

## Research Interests

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|-------------------------------------|--------------------------------------|
| ○ Artificial Intelligence, Robotics | ○ Algorithms, Computational Geometry |
| ○ Computer Vision, NLP              | ○ Deep Learning, Machine Learning    |

## Languages

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|----------------------------------|--------------------------|
| ○ <b>Persian (Farsi):</b> Native | ○ <b>English:</b> Fluent |
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- **Spanish:** Beginner

- **Arabic:** Intermediate

## Other Skills

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- Piano: Intermediate

- Soccer: Professional player