

# POUYA AGHAHOSEINI

Curriculum vitae last updated on February 4, 2021

76 John Angus Drive, Winnipeg, Manitoba, Canada R3Y 0C4. ♦ (+98)9102117201



## RESEARCH INTERESTS

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- Human-Computer Interaction
- Machine Learning
- Natural Language Processing
- Computer Vision
- Reinforcement Learning
- Social Media Computing

## EDUCATION

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**Master of Science in Computer Science** 2021-2022(Expected)

**Bachelor of Science in Computer Science** 2016-2020

Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran

CGPA: 3.6/4 (17.16/20)

Last Two Years GPA(68 Credits): 3.76/4 (18.45/20)      Selected Courses <sup>1</sup>

**Diploma in Mathematics and Physics** 2012-2016

Allameh Helli High School, Tehran , Iran (NODET)

GPA: 18.5/20

## RESEARCH EXPERIENCE

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**Short Text Similarity: A Survey** Nov 2019

*Literature Review*

- A Comprehensive Survey on works done in the area of Short Text Similarity from 2004 to 2019

## TEACHING EXPERIENCE

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**TA, Design and Analysis of Algorithms** Feb 2020 - Aug 2020

*Instructor: Dr.MohammadReza Kazemi*

- Holding Classes
- Designing and Evaluating Assignments

**Head TA, Fundamentals of Programming: C Language** Sep 2019 - Jan 2020

*Instructor: Dr.Farzaneh Salari*

- Holding Weekly Workshops
- Holding Office Hours
- Designing and Evaluating Assignments

**TA, Compilers** Sep 2019 - Jan 2020

*Instructor: Dr.Mohammad Hassan Shirali-Shahreza*

- Exam Preparation Classes and Assignment Evaluation

**TA, Data Structures and Algorithms** Feb 2019 - Jun 2019

*Instructor: Dr.Mohammad Akbari*

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<sup>1</sup> Introduction to Probability, Probability 1:A<sup>+</sup> ; Foundation of Matrix and Linear Algebra:A ; Foundation of Numerical Analysis:A<sup>+</sup> ; Data Structures and Algorithms:A<sup>+</sup> ; Database:A ; Software Design:A ; Design and Analysis of Algorithm:A<sup>+</sup>

- Held weekly classes and office hours.
- Designed and Evaluated assignment and projects.

### **Head TA, Introduction to the Theory of Computation**

Sep 2018 - Jan 2019

*Instructor: Dr.Fatemeh Zare-Mirakabad*

- Held weekly classes
- Supervised monthly workshops
- Designed and Evaluated assignment

## **EXTRACURRICULAR EXPERIENCE**

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### **Winter School Organizing Committee Member**

Mar 2019

*11th Winter School on Computational Geometry*

- The Winter School on Computational Geometry is held every year by Math and Computer Science Faculty, in collaboration with IPM Institute for Research in Fundamental Sciences.
- Notable researchers in computational geometry are invited for seminars and workshops in this program.

### **Student Scientific Chapter Membership**

Mar 2018 - Mar 2019

*Head Of Informatics and Competitions*

- Organized Data Science Seminars And Workshops.
- Coordinated 5 ACM Contests.
- Arranged On-Site Visits To Leading Tech Companies In Tehran.
- Arranged Talks With Alumni Currently Studying Or Working Abroad.
- Held 2018 New Student Orientation Program.
- Organized And Instructed Exam Preparation Classes(Calculus, Programming, Differential Equations).

## **PROJECTS**

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### **Factory Simulation with MATLAB**

Sep 2018 - Jan 2019

*Simulation Project*

- System modeling and simulation with MATLAB
- Simulation of a factory with different performances and various response time of each agent.

### **Medify: An Application for Fixing Tags And Organizing Media Files**

Jan 2018 - July 2018

*Software Engineering Course Project*

- The application was Developed using Scrum Methodology for Agile Software Development.
- The coursework required 5 presentations throughout the semester which included a 5-minute startup pitch presentation and the presentation of the first MVP(Minimum Viable Product).

### **Designing and Creating A Database From YAGO Datasets**

Jan 2018 - July 2018

*Database Course Project*

- Data Extraction using TSV files acquired from max plank institute website.
- Processing and Clustering TSV files with Python and MySQL.
- Designing and Creating A 3NF Database.

### **SESSET: A Space Efficient Skiplist Data Structure**

Sep 2017 - January 2018

*Data Structures Course Project*

- SSET was implemented with skiplist data structure.

- Each node consisted a BDeque which resulted in more efficient operations.
- All operations are done in  $O(\log n)^E + O(\sqrt{n})$  time.

## Range-Tree: A 2-D version of Range-Tree Data Structure

*Data Structures Course Project*

Sep 2017 - January 2018

- An Efficient Data Structure for geometrical queries.

## HONORS AND AWARDS

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**IGSES(International Graduate Student Entrance Scholarship)**  
*University of Manitoba*

Jan 2021

**Top 10% in Graduating Class**  
*Math and Computer Science Faculty*

Aug 2020

- Class of 70 students

**Ranked 1<sup>st</sup> GPA at Fall-2018 and Spring-2019 Semesters**  
*Math and Computer Science Faculty*

Sep 2018 - Jun 2019

- Class of 70 Students

**Qualified for the final round of Amirkabir ACM-ICPC Competition**  
*Computer Engineering Faculty*

Nov 2018

- The ACM-ICPC Contest is held every year at Amirkabir University of Technology. Teams from all universities across the country take part in this competition.
- Candidates for representing the university in Asia Region contest are primarily filtered here.

**Ranked Within the Top 0.7% (1,169 among 162,879 students) in Iranian University Entrance Exam**  
*Tehran, Iran*

Jul 2016

- The competition is intense since it is the only means to gain admission to universities.

**Accepted in NODET (National Organization for Development of Exceptional Talents) High School Entrance Exam**  
*Tehran, Iran*

Jul 2012

- NODET student selection exam is held every year nationwide for students starting high school. The organization is responsible for a number of schools across the country, which train students on a more advanced level in each field of study.

## SKILLS

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<b>Programming Languages</b>	C/C++, Python, R, MATLAB
<b>Web Technologies</b>	HTML, CSS, Javascript, MySQL
<b>Libraries</b>	numPy, Pandas
<b>Operating Systems</b>	Linux, Windows
<b>Languages</b>	Persian, English
<b>Miscellaneous</b>	L <sup>A</sup> T <sub>E</sub> X, Jupyter, Microsoft Office, GAMS, Database Design

## REFERENCES

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- **Andrea Bunt**  
Professor at the University of Manitoba

bunt at cs.umanitoba.ca

- **Mohammad Akbari**

Assistant Professor at Amirkabir University of Technology

akbari.ma@aut.ac.ir

- **Fatemeh Zare-Mirakabad**

Assistant Professor / Head of CS Group at Amirkabir University of Technology

f.zare@aut.ac.ir