CONTACT Information Computer Science Department University of Victoria,

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**EDUCATION** 

University of Victoria (Tehran Polytechnic), Victoria, BC, Canada

Ph.D. Computer Science,

2021 -

Under supervision of Prof. Nishant Mehta

Online Learning

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

M.Sc. Artificial Intelligence,

2017 - 2020

CGPA: 17.34/ 20

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

B.Sc. Computer Software Engineering,

2013 - 2017

 $\begin{array}{cccc} \text{CGPA: Overall} & & 18.47 \ / \ 20 \ (3.78/4) \\ & & \text{Selected Course} & & 19.33 \ / \ 20 \ (4/4) \end{array}$ 

Internship

Shanghai University of Finance and Economics, Shanghai, China

Visiting Research Student at Institute for Theoretical Computer Science Under supervision of Prof. Nick Gravin Summer 2019

Online Stochastic Matching

RESEARCH INTERESTS

- Online Learning
- Algorithmic Game Theory
- Mechanism Design
- Online Algorithms

**PUBLICATIONS** 

Cristóbal Guzmán, and Nishant Mehta, and Ali Mortazavi. "Best-case lower bounds in online learning." Advances in Neural Information Processing Systems 34 (2021).

ATTENDED CONFERENCES AND SEMINARS

- Winter Seminar Series in advanced topics of computer science Jan 2020 Talks on "Computational Concentration of measure and robust learning" by Omid Etesami, "Fairness in Clustering" by Mohammad Mahdian, "Price of competition and Dueling Games" by Sina Dehghani, etc.
- Workshop on Data Science and Combinatorial Algorithms April 2019

  An introduction to "mechanism design and differential privacy" by Dr. Mahdian, "Clustering and stable instances" by Prof. Salavatipour, and other talks.
- Short course on Information Design

  An introduction to information design by Prof. Haghpanah.

  December 2018
- Block Chain and Cryptocurrency February 2018
  An introduction to Block Chain Mechanism and different Cryptocurrency systems. By
  Prof. Hatami and Prof. Salavati.
- Journal Club at IPM Augest 2017 October 2017 Weekly seminars in Cognitive Science hosted by Prof. Abbasian.
- Workshop on Game Theory

  An introduction by Prof. Salavati to Game Theory Concepts.

Highlighted
Courses

• Probability and Statistics	20/20	• Data Structures	20/20
• Stochastic Processes	20/20	• Algorithm Design	20/20
• Data Mining	19/20	• Advanced Topics in Algorithms	20/20
• Collective Decision Making	A+	• Theory of Computation	20/20
• Probabilistic Graphical Models	17/20	• Discrete Mathematics	17.5/20
• Statistical Machine Learning	20/20	• Computational Geometry	19.3/20

#### Posts

- Online Stochastic Matching [Link]
- Baraess Paradox and Smartphone Navigator Applications [Link]
- Why mean squared error [Link]

### TEACHING EXPERIENCE

- Probability and Statistics, Teaching Assistant spring 2018
  Under Supervision of Prof. Amirhaeri (haeri@aut.ac.ir)
- Special Class for Olympiad Preparation, Instructor spring 2017 and 2018 Intro. To Theory of Computation, Algorithm Design
- Algorithm Design, Teaching Assistant spring 2017 Under Supervision of Prof. Rahmati (zrahmati@aut.ac.ir)
- Algorithm Design, Teaching Assistant spring 2016
  Under Supervision of Prof. Mousavi (srm@aut.ac.ir)

# ACADEMIC PROJECTS

Image Denoising and Segmentation Using Markov Random Field [code][report] Optimizing energy function using Simulated Annealing, Comparing different color spaces results.

### Text Summarization [code][report]

Extracting important sentences as a summary using page rank algorithm and word2vec.

## $Text\ Classification\ [{\tt code}][{\tt report}]$

Using different metrics (mutual information, information gain, etc.) for extracting important words for document classification task.