

Education

University of Victoria

Ph.D. Computer Science,

Victoria, BC, Canada
Jan 2021 – Expected Aug 2026

- Research focus: Online Learning and Game Theory
- Supervised by [Prof. Nishant Mehta](#)
- **Publications:** NeurIPS and AISTATS
- **Coursework:** Online Learning, Collective Decision Making, Algorithms for Convex Optimization, Statistical Machine Learning Theory
- GPA: 9/9

Amirkabir University of Technology

M.Sc. Artificial Intelligence,

Tehran, Iran
Sept 2017 – Sept 2020

- **Coursework:** Statistical Natural Language Processing, Probabilistic Graphical Models, Big Data Analytics

Amirkabir University of Technology

B.Sc. Computer Software Engineering,

Tehran, Iran
Sept 2013 – Sept 2017

- GPA: 3.78/4
- **B.Sc. Project:** Designed genetic and simulated annealing algorithms for a variant of the Traveling Salesman Problem (TSP) allowing edge reuse with reduced cost. Encoded traveling paths as ordered vertex sets and introduced operations for converting paths to properly explore all possible paths. Compared heuristic performance with optimal solutions from Integer Linear Programming for small graphs. ([Code and Report](#)) [🔗](#)

Internship

Shanghai University of Finance and Economics

Research Internship at Institute for Theoretical Computer Science

Shanghai, China
August 2019 – September 2019

- Hosted by [Prof. Nick Gravin](#)
- [Project](#) [🔗](#): Worked on Online Stochastic Matching with a general graph model where edge appearances follow a Bernoulli distribution. Focused on developing and analyzing algorithms intended to exceed the traditional 1/2 competitive ratio, enhancing my skills in algorithm design and theoretical analysis.

Experience

PhD Research Assistant

Machine Learning Theory Group

Jan 2021 -
University of Victoria

- **Best-Case Lower Bounds in Online Learning:** Characterized best-case sequences for the HEDGE algorithm with unknown time horizon, giving insights into minimal regret loss sequences. This work, alongside generalized FTRL lower bounds, can be used in designing online learning algorithms to ensure group fairness when group sizes are unknown. [Published in NeurIPS 2021.](#) [🔗](#)
- **Exploring the Price of Truthfulness in Incentive-Compatible Bandits:** Demonstrated a worst-case $\Omega(T^{2/3})$ regret lower bound for the WSU-UX algorithm, highlighting the challenges in designing truthful online learning algorithms with reputation maximizing experts. [Published in AISTATS 2024.](#) [🔗](#)

Teaching Assistant

Computer Science Department

Jan 2021 -
University of Victoria

- **Notable Responsibilities:** Designed and Taught labs and tutorials, helped prepare new TAs with teaching tasks
- **Courses:** Algorithms and Data Structure II, Theory of Computation, Data Mining, Collective Decision-Making, Advanced Data Structure and Optimization.

Applied Machine Learning Projects

- **Image Denoising and Segmentation Using Markov Random Field** ([code](#), [report](#)) Implemented image denoising and segmentation by optimizing with Simulated Annealing using Markov Random Fields, demonstrating that HSV and RGB color spaces are more effective than Grayscale due to richer information.
- **Text Summarization** ([code](#), [report](#)): Developed a graph-based method using word2vec and PageRank, with nodes in the graph representing sentences or words and transition edges based on word2vec similarity. Evaluation with ROUGE metrics suggested that the word-level representation in the graph yielded superior performance.
- **Text Classification** ([code](#), [report](#)) Implemented a document classification project utilizing Information Gain, Mutual Information, and Chi-Squared to select keywords for classifying Persian texts. Evaluated performance across feature sets and identified that a larger set of words has the potential to improve accuracy.

Publications

- Ali Mortazavi, Junhao Lin, and Nishant Mehta. "On the price of exact truthfulness in incentive-compatible online learning with bandit feedback: a regret lower bound for WSU-UX." International Conference on Artificial Intelligence and Statistics. PMLR, 2024. (**AISTATS 2024**)
- Cristóbal Guzmán, and Nishant Mehta, and Ali Mortazavi. "Best-case lower bounds in online learning" Advances in Neural Information Processing Systems 34 (2021). (**NeurIPS 2021**)

Service

- Reviewer for Artificial Intelligence and Statistics (AISTATS) 2025
- Reviewer for Neural Information Processing Systems (NeurIPS) 2024
- Volunteer for Symposium on Theory of Computing (STOC) 2024

Presentation

- "Best-case lower bounds in online learning", NeurIPS 2021. ([Link to the presentation](#))

Research Interest

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

Technical Skills

Languages: Python, Java, C++

Awards

- University of Victoria Graduate Award 2021-2024
- University of Victoria Graduate TA Award 2021-2024
- Charles S. Humphrey Graduate Student Award 2022
- UVic PhD Fellowship Award 2021
- Ranked 3rd (out of 100) in terms of Cumulative GPA among students of computer engineering, 2013 Entrance 2017
- Awarded direct admission to the M.Sc. program in Artificial Intelligence at Amirkabir University of Technology as a Talented Undergraduate Student 2017
- Awarded as Outstanding Student at Amirkabir University of Technology 2015-2017