

Mohammadhossein Naderi

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Research Interests

- Systems for ML, Distributed ML

Education

- **York University**, Toronto, Canada 2023 – present
M.Sc. in Computer Science
GPA: 3.88/4
- **Amirkabir University of Technology**, Tehran, Iran 2017 – 2022
B.Sc. in Computer Engineering
GPA: 17.63/20
- **National Organization for Development of Exceptional Talents**, Tehran, Iran 2013 – 2017
Diploma in Mathematics and Physics
GPA: 19.20/20

Research Experience

- **Efficient Distributed Training of Large ML Models** 2023 - present
PACS Lab at York University, Toronto, Canada
Supervisor: [Prof. Hamzeh Khazaei](#)
We investigate how we can leverage distributed training techniques to help democratize large machine learning models. We study ways to train large ML models with minimum cost and maintenance in deployment.
- **Relearning The Nvidia GameGAN For New Games** SU21
HPC Lab at Institute For Research In Fundamental Sciences (IPM), Tehran, Iran
Supervisor: [Prof. Dara Rahmati](#)
This project aims to setup and relearn the Nvidia GameGAN to new games such as soccer stars to find feasibility of learning the physics rules by GameGAN. To achieve this goal, learning the details of GameGAN and finding enhancement opportunities is our priority.

Teaching Assistance Experience

- **Design and Analysis of Algorithms, York University, Toronto, Canada** WI23, WI24, WI25
Supervisor: Profs. Larry Yueli Zhang, Jeff Edmonds, Eric Ruppert
Grading assignments, projects, and exams.
- **Coding with Objects (CS2), York University, Toronto, Canada** SU25
Supervisor: Prof. May Haidar
Coordinating labs, grading assignments, projects, and exams.

- **Introduction to Database Systems, York University, Toronto, Canada** WI22, FA23
Supervisor: Prof. Marzieh Ahmadzadeh
 Grading assignments, projects, and exams.
- **Data Mining, York University, Toronto, Canada** SU23
Supervisor: Prof. Habib-ur Rehman
 Grading assignments, projects, and exams.
- **Computer Network Protocol & Apps, York University, Toronto, Canada** SU23, WI25
Supervisor: Profs: Habib-ur Rehman, Jonatan Schroeder
 Grading assignments, projects, and exams.
- **Algorithm Design, Amirkabir University of Technology, Tehran, Iran** WI19
Supervisor: Prof. Sara Bourbour
 Designing and Grading Assignments and Projects and Writing Solutions for Assignments.

Work Experience

- **Full Stack Developer**, FANAP Telecom, Tehran, Iran December 2020 – June 2021
 Implementing Software Services Used in Telecommunication Business.
 Technologies: Java, Spring, AngularJS, MySQL
- **Data Science Intern**, Hesaba Co, Tehran, Iran September 2020 – November 2020
 Learning Fundamentals of Data Science.
 Technologies: R Programming Language, dplyr, Sparklyr, ggplot2
- **QA Engineer Intern**, Pinket, Tehran, Iran June 2020 – September 2020
 Learning Fundamentals of Quality Assurance Engineering.
 Technologies: Java, Appium, Selenium, Jenkins, Gradle

Related Courses

- **Algorithmics and Artificial Intelligence**
 - Data Visualization and Analytics (A) (Graduate course)
 - Information Networks (A) (Graduate Course)
 - Theory of Distributed Systems (A-) (Graduate Course)
 - Algorithm Design (20/20)
 - Principles and Applications of Artificial Intelligence
 - Introduction to Machine Learning and Pattern Recognition (A+) (Graduate Course)
 - Natural Language Processing with Classification and Vector Spaces ([Course Certificate](#))
 - Information Retrieval (17/20)
- **Software Engineering and Programming**
 - Analytical Performance Modeling and Design of Computing Systems (A) (Graduate Course)
 - Advanced Programming (19/20)
 - Web Programming (20/20)

- Mobile Programming (19/20)
- Software Engineering I (17.75/20)
- Software Engineering II (20/20)
- **Mathematics**
 - Discrete Mathematics (18.5/20)
 - Applied Linear Algebra(18.19/20)
 - Probability and Statistics (18.4/20)

Honors and Awards

- Placed Top 0.5% in The Nationwide University Entrance Exam (Bachelor's), *August 2017*.
- Ranked 1st Among All Freshmen in the Amirkabir University of Technology International Collegiate Programming Contest ([AUT-ICPC](#)), *October 2017*.
- Ranked 2nd in the Computer Engineering General Skills Contest at Amirkabir University of Technology, *July 2020*.
- Selected as a Member of the University Team for the National Scientific Olympiad in Computer Engineering, *June 2021*.
- Qualified for the 2nd Round of Iranian National Olympiad in Informatics, *2014*.

Relevant Skills

- Programming Languages: Python, Java, Kotlin, C, C++, R, Racket
- System Technologies: Kubernetes, Docker
- Database Systems: PostgreSQL, MySQL, SQLite, MongoDB
- Web Technologies: HTML, CSS, JavaScript, AngularJS, React, Spring Boot, Node.js, Express.js
- Documentation: L^AT_EX, MS Office
- Human Languages: Persian (Native), English (Fluent; TOEFL: 108)