

# Amirhesam Bolandi

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## EDUCATION

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### Master of Science - Computer Science and Engineering

2023 – Present

[The Polytechnic University of Milan](#), Milan, Italy

### Bachelor of Science - Computer Engineering

2018 – 2023

[Shahid Beheshti University](#), Tehran, Iran

- **GPA:** First-class honours (18.47/20)
- **GPA in German System:** 1.4
- **Bachelor Project Title:** Determining the probability of whether a graph snapshot belongs to a temporal graph via GNNs

### High School Diploma in Mathematics

2014 – 2018

Hashemi-nejad School, Mashhad, Iran

- Affiliated with the National Organization for the Development of Exceptional Talents (NODET)
- **GPA:** 19.55/20

## RESEARCH EXPERIENCE

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### Software defect prediction using visualization and Deep Learning

Sep 2021 – Present

[SBU](#), Tehran, Iran

- Enhanced Software Defect Prediction, introduced innovative methods for visualizing and augmenting software to leverage CNN models for classification.
- Achieved **92.9% accuracy** in predicting whether a program is defective or not.
- Under the supervision of [Dr. Mojtaba Vahidi-Asl](#).

### Determining whether a graph snapshot belongs to a temporal graph via GNNs

June 2022 – Feb 2023

[SBU](#), Tehran, Iran

- Leveraging Deep Learning to predict whether a graph is the next snapshot of a temporal graph or not (in progress)

## TEACHING EXPERIENCE

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### Teacher Assistant

[SBU](#), Tehran, Iran

- Machine Learning (Dr. Hamed Malek) Fall 2022
- Operating Systems (Dr. Mohsen Ebrahimi-Moghaddam) Fall 2021, Spring 2022
- Robotics (Dr. Armin Salimi-Badr) Spring 2022
- Digital Logic Design (Dr. Hamidreza Mahdiani) Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022
- Systems Analysis and Design (Dr. Alireza Shameli) Fall 2021
- Advanced Programming (Dr. Sadegh Aliakbary) Spring 2021
- Theory of Languages and Automata (Dr. Ramak Ghavamizadeh) Fall 2020
- Advanced Programming (Dr. Mojtaba Vahidi-Asl) Fall 2019, Spring 2020, Fall 2020
- Systems Analysis and Design (Dr. Gohari) Fall 2020

## WORK EXPERIENCE

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### Machine Learning Engineer

May 2023 – Aug 2023  
[Wallex](#), Tehran, Iran

- Worked on different LLMs, Embeddings, and Vector DBs.
- Developed an AI-based chat assistant for financial market professionals.

### Software Engineer in Data Analytics platform

June 2021 – Oct 2021  
[Mohaymen ICT Group](#), Tehran, Iran

- Providing a Data analytics platform for large Iranian enterprises.

### Intern Data Analytics platform

Jan 2021 – June 2021  
[Mohaymen ICT Group](#), Tehran, Iran

- Learned about C#, .NET framework, Elastic Search, MySQL.
- Became familiar with concepts such as hash tables, graphs, anomaly detection, etc.

## SKILLS

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**Languages:** Persian(native), English(fluent, IELTS score: 7.5)

**Programming Languages:** Python, Java, C, C#, Matlab, GoLang, Verilog, VHDL

**Frameworks/Libraries:** Keras, Tensorflow, Pandas, NumPy, Scikit-Learn, .NET

**Tools:** Jupyter Notebook, Colab Notebook, MySQL, Webots, Git

## HONORS & AWARDS

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Ranked **1<sup>st</sup>** in the CSE faculty of Shahid Beheshti University among students in the First semester. Fall 2018

Ranked **6<sup>th</sup>** in the CSE faculty of Shahid Beheshti University among students. Feb 2023

Ranked Top **0.7%** among nearly 145000 participants of undergraduate university entrance exam in mathematics. 2018

Ranked Top **3** among more than 1000 participant in Mohaymen ICT entrance Contest. Sep 2020

## SELECTED PROJECTS

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**Design and Implementation of a Recommender plug-in for online shops** | *Python, Tensorflow, LSTM, PHP* Spring 2023

- Gathering proper data for product recommendation.
- Implementing a recommender model using semantic search.
- Developing Backend and Frontend modules for the plugin

**Sentiment Analysis of [Digikala](#) comments** | *Python, Tensorflow, LSTM* Fall 2021

- Implemented a model using LSTM and word embedding to analyze sentiments of customers' comments about products in a famous Iranian online shop.
- Achieved 94% accuracy.

**Prediction of Bitcoin price** | *Python, Pandas, NumPy* Fall 2021

- Predicted price of Bitcoin using Evolutionary Algorithms to set parameters of Multinomial Logistic Regression.

**An Artificial Intelligence agent playing Reversi** | *Python, NumPy* Fall 2020

- Developed an Intelligence agent to play Reversi against humans using Evolutionary Algorithms.

**Implementing Bug Algorithms for Robot Motion planning** | *Python, Webots*

Fall 2021

- Implemented Bug0, Bug1, and Bug2 algorithms to plan the motion of an omnidirectional Robot.

**Correlation between 5 primary personality traits and Covid-19-related tensions** | *Python, Pandas, NumPy*

Spring 2021

- Used questionnaires about [5 primary personality traits](#) and investigated the correlation between them and the physical and mental tensions which people experienced due to the Covid-19 pandemic.

**Design and Implementation of a specialized Object Pool** | *C#, .NET, multi-threading libraries*

Summer 2021

- Designed an Object pool to meet special needs such as high concurrency.
- Used a variety of semaphores and concurrent data structures.

**An UberEats-like website** | *C#, Angular*

Spring 2021

- Built a website similar to UberEats, developing the website's backend using C and frontend using Angular.

**A Google-Classroom-like android app** | *Java, android*

Spring 2019

- Built an android app similar to Google Classroom, used Java for both backend and frontend (android studio).

## SELECTED UNIVERSITY COURSES

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**Computational Intelligence** | 20/20

Fall 2021

**Fundamentals of Robotics** | 20/20

Fall 2021

**Artificial Intelligence** | 20/20

Fall 2020

**Signals and Systems** | 19.06/20

Fall 2020

**Data Bases** | 17.6/20

Fall 2020