

# Mahin Vazifehdan

PhD Student, University of Pavia

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## PERSONAL STATEMENT

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*I am a disciplined, hardworking computer engineer who loves everything about data science and machine learning. Through my work in Iran and Italy as a researcher, I have developed team working and problem-solving skills. Since I enjoy doing machine learning projects and am highly self-motivated to learn new things, I am currently a PhD student to improve in the areas of my interest.*

## INTEREST AREAS

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- Data Preprocessing
- Data Collection
- Supervised Learning
- Deep Learning

## EDUCATION

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- **PhD of Bioengineering, Bioinformatics and Health Technology**, University of Pavia, Italy (Nov 2022 – Present)
  - Dissertation: Multiple Sclerosis Progression Prediction
- **MSc of Software Computer Engineering**, University of IAUM, Mashhad, Iran (Sep 2013 - Jul 2016)
  - Thesis "Missing Value Imputation to improve Breast Cancer Recurrence Prediction using Tensor and Bayesian Network"(19.75 out of 20) **GPA : 3.90 / 4.0**
- **BSc of Computer Engineering**, Asrar Institute of Higher Education of Mashhad, Iran (Sep 2010 - Sep 2012)
  - Thesis:" Design and Implementation of an Online Hotel Website by ASP. Net" **GPA : 3.48 / 4.0**
- **AS of Computer Science**, University of Birjand, Iran (Sep 2008 - Sep 2010)
  - Thesis: "Design and Implementation of a Computer Game by Acrobat Flash" **GPA : 3.00 / 4.0**

## WORK EXPERIENCE

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- **Machine Learning Researcher, University of Pavia, Italy** (May 2022- October 2022)
  - Big Data Collection for [BrainTeaser](#) Project (An International Project for Three European Countries)
  - Big Data Preprocessing (Missing Value Imputation)
  - Big Data Transformation (NC into CSV)
  - Big Data Integration (Weather and Air Quality Data)
- **Machine Learning Engineer, Radinchain Company, Mashhad, Iran** (Nov 2021 – Feb 2022)
  - Research on Urban Traffic Management System based on Machine Learning
- **Data Scientist at Samen Company, Mashhad** (Nov 2020 – Apr 2021)
  - Working with SQLite in Flask for a Blockchain based project
  - Program CRUD on Web Server with Flask
  - Basic Image Processing with OpenCV
- **Teacher Assistant at Islamic Azad University, Ferdows** (Mar 2016 - Sep 2019)
  - ✓ Data Preprocessing (Missing Value Imputation with Prediction, Classic and Mathematic Methods )
  - ✓ Predictive Modelling (Real-World Breast Cancer Prediction)
  - ✓ Working on Imbalanced Fraud Detection Data and Feature Selection
  - ✓ Weighted ELM Method for Survival Patient's Prediction
  - ✓ Sample Selection with SVM Method

## TEACHING EXPERIENCE

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- **Lecturer** (Sep 2017 - Jun 2019)  
Islamic Azad University, Ferdows, Iran
  - Courses Lectured: Machine Learning
- **Lecturer** (Sep 2016 - Jun 2019)  
Pirouzan Institute of Higher Education, Ferdows, Iran

- Courses Lectured: Artificial Intelligent, Machine Learning, Statistics
- **Machine Learning Tutor** (Mar 2016 - Jun 2019)
  - Machine Learning and Data Science to BSc. and MSc. Students.

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## SELECTED TRAINING COURSES

- IBM Data Analysis with Python in Coursera
- Machine Learning by Stanford University in Coursera-Second Version (2022)
- Python for Computer Vision with OpenCV and Deep Learning
- Applied Machine Learning with Python in Coursera
- Applied Plotting, Charting & Data Representation in Python
- Programming for Everybody in Coursera (2022)
- Python for state-of-the-art Deep Learning techniques using Python (Pytorch and Pycharm) (Ferdowsi University of Mashhad)
- Matlab for Machine Learning and Data Science (Ferdowsi University of Mashhad)
- Data Science for Social Networks in ICTCK International Conference (Islamic Azad University of Mashhad)

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## SKILLS

- **Programming in Python**
  - Expert in Data Preprocessing
  - Expert in Data Collection, Feature Selection, Predictive Modelling, Data Evaluation, Data Resampling
  - Expert in Data Visualization and Data Analysis
  - Good knowledge of Deep Learning
  - Good Knowledge of NLP
  - Basic knowledge of AWS, Hadoop
- **Python Libraries:** OS, Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Missingno, OpenCV, Tensorflow, Pytorch, Keras, netCDF4, re, NLTK, Eli5
- **Data Science tools:** Anaconda, Jupyter Notebook, Google Colab, Weka, and Rapid Miner.
- **Database tools:** SQL, SQLite, SQLAlchemy
- **Statistical tools:** Microsoft Excel, SPSS, SAS
- **Other tools:** Overleaf, WordPress, HTML, CSS, ASP.Net, Visual Studio (C#.Net), VSCode

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## HONORS

- Ranked in the top 30% selected PhD student scholarship at the University of Pavia (6 out of 17)
- Scholarship Winner for the BrainTeaser international project for six months at the University of Pavia (2022)
- Selected for the 11th Data Challenge week (hosted by VTEC working on the project "Improve accuracy of people count by combining IR camera and other sensor parameters", Jheronimus Academy of Data Science, University of Eindhoven (TU/e), Netherlands (2021))
- Ranked in the top 10% of the Erasmus+ Scholarship for the Master of Medical Imaging program (2021)
- Getting admission in Idaho, Nevada universities in USA and VUB university in Belgium and Tilburg, Utrecht and Radboud universities in the Netherlands (2021)
- Ranked in the top 10% of the IAUM University of M.Sc. graduating class in 2016 (6 out of 102) (2016)
- Ranked in the top 5% of the Asrar Institute of Higher Education of B.Sc. graduating class (2012)
- Ranked 92<sup>nd</sup> in the Entrance University Exam of IAUM (2013)

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## PUBLICATIONS

- **M. Vazifehdan, M.H. Moattar, M. Jalali, A Hybrid Bayesian Network and Tensor Factorization Approach for Missing Value Imputation to Improve Breast Cancer Recurrence Prediction**, Journal of King Saud University Computer and Information Sciences, Volume 31, Issue 2, April 2019, Pages 175-184 ([DOI](#)) (**Impact Factor:13.473, (Ranked Q1, 33 Citations)**)

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## LANGUAGES SKILLS

**Persian:** Mother tongue **English:** Advanced (**IELTS Score: 6.5**) **Italian:** Basic

## REFERENCES

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- Dr. Javad Vazifehdan, ASML Engineering Group Lead, Eindhoven, the Netherlands  
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- Prof. Riccardo Bellazzi, Full Professor of Bioengineering and Biomedical Informatics at the University of Pavia, Italy  
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- Prof. Mehrdad Jalali, Associate Professor, Institute of Nanotechnology, Karlsruhe Institute of Technology, Germany.  
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- Prof. Mohammad H. Moattar, Associate Professor, Department of Computer Engineering, Islamic Azad University of Mashhad, Iran. **(First Master's Thesis Supervisor)**  
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