

# Mahdi Mohammadzadeh

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## Education

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M.Sc. in Data Science ([EMOS](#)), ([Program taught entirely in English](#)), Luigi Vanvitelli University, Caserta, Italy | September 2023 – Expected 2026

- Courses: Machine Learning & Artificial Intelligence, Biostatistics, Longitudinal Multi-view Data Analysis, Network Science
- Focus on statistical modeling and analysis of large-scale population and health-related datasets

Erasmus+ Student, University of Copenhagen (Program conducted entirely in English) | August 2025 – January 2026

- Courses: Natural Language Processing, Climate Opinion and behavior in social data science, Economics and Business Anthropology

B.Sc. in Information Technology, Azad University of Tabriz, Tabriz, Iran | September 2016 – June 2021

- Courses: Data Structures, Programming in C and Java, Project Management, Algorithm Design

## Selected Projects & Data Analysis Experience

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### Population Data Analysis & Multivariate Modeling (LMDA Projects)

- Analyzed large-scale international survey datasets to identify patterns in social and behavioral variables across populations using ISSP data
- Applied Correspondence Analysis (CA), Multiple Correspondence Analysis (MCA), and Multiple Factor Analysis (MFA) in R
- Conducted chi-square tests and contingency table analysis for categorical data interpretation

### Health Data Analysis: Heart Disease Risk Modeling

- Analyzed clinical dataset (n=918) including blood pressure, cholesterol, ECG, and chest pain indicators
- Trained and evaluated machine learning models (Random Forest, SVM, Logistic Regression), achieving 88% accuracy
- Interpreted results in relation to known cardiovascular risk factors

## **Multilingual NLP Question Answering Project**

- Developed cross-lingual models (TF-IDF, mBERT, mT5) for multilingual QA
- Evaluated performance using F1 and BLEU metrics across multiple languages.

## **Biostatistics: ANOVA and Bonferroni Analysis**

- Performed ANOVA and Bonferroni post-hoc tests on clinical data comparing therapeutic effects across three cohorts. Highlighted BMI as a significant covariate influencing weight outcomes.

## **Professional Experience**

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### **Data Science Intern – ISTAT (Italian National Institute of Statistics), Naples, Italy | February 2025 – January 2026**

- Conducted longitudinal analysis of large-scale population health and socio-economic data using Eurostat indicators (healthcare access, GDP, unemployment, poverty)
- Developed reproducible data processing pipelines for large-scale datasets in Python (Pandas, StatsModels, Scikit-learn) for statistical modeling and regional-level analysis
- Applied statistical and machine learning models (fixed-effects, Lasso, Random Forest) to identify patterns in health inequality across regions

### **Web Developer – QCode Programming Company, Tabriz, Iran | January 2017 – January 2023**

- Developed and maintained web applications and backend APIs
- Implemented secure authentication and data handling workflows
- Optimized front- and back-end code to reduce load times by 15% and boost engagement by 20%.

### **IT Support – Kohin Bana Company, Tehran, Iran | January 2017 – January 2023**

- Provided technical support and maintained IT systems, ensuring reliable daily operations.

## **Data Governance & Ethics**

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- Knowledge of GDPR principles and ethical handling of sensitive data
- Familiarity with legal and ethical challenges in large-scale data processing and AI systems
- Academic work on data privacy, algorithmic profiling, and digital identity

## Skills

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### Language

- English (Full Professional/Academic Proficiency), Azeri/Turkish (Native), Persian (Native), Italian (A1), German: Beginner (Currently taking A1 courses)

### Programming, Data Science & Statistical Analysis

- Python, R, SQL, Machine Learning, Deep Learning, Pandas.

### IT & Systems

- Microsoft Excel, Linux, Microsoft Server 2019(MCSA curriculum concepts), Networking(CompTIA Network+ curriculum concepts), VPNs, Crypto Fundamentals, PC Hardware Assembly.

### Analytical Tools

- ANOVA, Factor Analysis, NLP, Data Visualization, Predictive Modeling.

## Academic Achievements

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- Erasmus+ Scholarship - University of Copenhagen
- Scholarship – Luigi Vanvitelli University
- Merit based scholarship - Luigi Vanvitelli University

## References

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- Prof. Fiammetta Marulli – Professor of Computer Science Engineering, Università degli Studi della Campania "Luigi Vanvitelli" | Email: fiammetta.marulli@unicampania.it
- Prof. Lelio Campanile – Professor of Computer Science Engineering, Università degli Studi della Campania "Luigi Vanvitelli" | Email: lelio.campanile@unicampania.it
- Prof. Massimiliano Giacalone – Professor of Statistics, Università degli Studi della Campania "Luigi Vanvitelli" | Email: Massimiliano.giacalone@unicampania.it