

# Rasoul Samei

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## SUMMARY

Data Scientist with expertise in machine learning, data analysis, and visualization. Currently contributing to clinical and epidemiological research at Istituto Mario Negri. Successfully developed a high-impact anomaly detection system at The Openwork Partnership. Proficient in Python, R, SQL, Power BI, and SparkSQL, with experience in designing KPIs and building dynamic reports to drive strategic decision-making. Holds a Master's in Economics and Data Analysis, with a goal of advancing as a full-stack data scientist.

## PROFESSIONAL EXPERIENCE

### ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI

Ranica, Italy

#### Data Scientist

2024 – Present

- Develop and validate predictive models to support clinical and epidemiological research.
- Design and implement workflows for processing and analyzing clinical trial data.
- Collaborate with multidisciplinary teams to translate data insights into actionable healthcare strategies.

### THE OPENWORK PARTNERSHIP

Swindon, United Kingdom

#### Data Scientist Intern

2023 – 2024

- Developed an end-to-end Anomaly Detection system using unsupervised machine learning techniques within Azure ML Studio, leveraging Python SDK2 for pipeline integration and automation.
- Utilized SQL in Azure Synapse Analytics for managing and analyzing large datasets, extracting trends, insights and developed more than 28 KPIs to support strategic decisions.
- Created dynamic reports and dashboards in Power BI, translating complex data into accessible and actionable insights.

### UNIVERSITY OF BERGAMO

Bergamo, Italy

#### Machine Learning Tutor

2023 – 2023

- Conducted group tutoring sessions emphasizing the practical applications of machine learning algorithms, enhancing students' hands-on skills.
- Provided comprehensive assistance to students on assignments, projects, and exams, focusing on machine learning and data analysis to bolster academic success.
- Cultivated a collaborative learning environment and offered technical support, ensuring students effectively grasped complex concepts and tools.

### Selected Project Experience

- Time Series Anomaly Detection for Industrial Machinery
  - Engineered a time series anomaly detection tool for monitoring industrial machinery, utilizing both supervised and unsupervised learning models to pinpoint irregularities in sensor data at a 40Hz frequency, culminating in an ensemble approach for prompt malfunction alerts and reduced equipment downtime.
- Product Recommendation System with Sentiment Analysis
  - Developed a nuanced product recommendation engine by conducting sentiment analysis with supervised learning techniques on customer reviews. Integrated Surprise library for behavior-based personalization and content-based filtering to enhance recommendation precision by factoring in sentiment scores and user-product interactions.

## TECHNICAL SKILLS

**Programming Languages:** Python, R, SQL

**Machine Learning:** Scikit-learn, H2O

**Version Control:** Git

**Data Analysis Tools:** Power BI, Excel, Pandas, Matplotlib, NumPy

**Big Data Technologies:** PySpark, SparkSQL

**Agile & Project Management:** Scrum framework, Sprint planning

## EDUCATION

Università degli Studi di Bergamo

Bergamo, Italy

*Master of Arts in Economics and Data Analysis*

IAU of Neyshabur

Neyshabur, Iran

*Bachelor of Arts in Business Management*

## ADDITIONAL INFORMATION

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- **Interpersonal Skills:**
  - Demonstrated problem-solving and adaptability in fast-paced environments.
  - Proven ability in team collaboration and conflict resolution.
- **Languages:** Persian (Native), English (Proficient), German/Italian/Arabic (Basic)
- **Awards:** First Place at the Stat-Hackathon Competition, Università degli Studi di Bergamo, May/June 2021
  - Excelled in advanced analytics, feature selection techniques (PCA, MCA, FAMD), model selection, and data presentation using 3 different tools (e.g. Python, R, and SAS).

## ADDITIONAL EXPERIENCE

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### **Professional Guitar Performer and Instructor, 2010 – 2021**

- Engaged audiences and students in musical performances and instruction, honing communication, pedagogy, and audience engagement skills.