

Vahid Ahmadi

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☎ (+44) 7404 745322 | ✉ va.vahidahmadi@gmail.com | 📷 vahid-ahmadi | 🌐 vahidahmadi

Professional Experience

PolicyEngine

London, UK

Research Associate

10/2024 - Present

- Delivered advanced economic **forecasting** solutions to 8 clients, leveraging rigorous **mathematical modelling** and **production ML pipelines** for multi-dimensional frameworks.
- Expanded microsimulation economic software by integrating **distributional analysis**, sensitivity testing, uncertainty estimation, and multi-level disaggregation.
- Conducted **production ML** data enhancement, applying quantile regression forests, canonical correlation, autoencoders, **vector optimisation**, and imputation techniques.

London School of Economics (LSE)

Pre-Doctoral Researcher

09/2023 - 10/2024

- Applied econometric techniques, including **panel data**, **time series** analysis, **causal inference**, and **Markov processes** in empirical finance research.
- Incorporated computational models, **dynamic stochastic models**, **Monte Carlo** simulations, and **Bayesian** methods in macroeconomic research.

University of Munich

Statistical Researcher

02/2023 - 09/2023

- Implemented statistical tools for **causal identification**, using randomisation, bootstrap, and high-dimensional analysis.

EQS Group

Data Scientist Intern

12/2022 - 02/2023

- Designed **pattern discovery** and time series strategies with **SQL** and **Python** to improve sales efficiency by 5%.

PwC

AI Specialist Intern

12/2021 - 12/2022

- Consulted on 3 AI projects in robotic process automation, designing technical guidelines for **risk management**.

RiskLab

Machine Learning Engineer

01/2020 - 11/2021

- Developed **production Machine Learning** models for credit scoring in banks, analysing 3 million customer records and deployed a **full production pipeline** with real-time inference.
- Deployed **Clustering**, **PCA**, and **Deep Learning** methods, leveraging **AWS** Cloud-based solutions for **data engineering**, **model deployment** and **hyperparameter tuning**.

Technical Skills

Machine Learning & AI

- **Production ML:** Deployed ML models for 3M+ customer records, credit scoring systems, demand forecasting
- **Demand Prediction:** Time series forecasting, econometric models, optimization algorithms
- **Algorithms:** Random Forest, Deep Learning, Clustering, PCA, Regression, Classification, Reinforcement Learning
- **NLP & LLM:** Natural Language Processing, Large Language Models, Text Analytics
- **Frameworks:** TensorFlow, PyTorch, Scikit-learn

Programming

- **Python:** NumPy, Pandas, SciKit-learn, PyTorch, spaCy, Matplotlib
- **SQL:** MySQL
- **Matlab:** Mathematical Modeling
- **JavaScript**
- **C++**

Cloud Platforms & Tools

- **AWS:** SageMaker, Lambda, S3, Hyperparameter Tuning, Cloud-based ML Pipelines
- **Data Visualization:** Matplotlib, Seaborn, ggplot2, Tableau
- **Development:** Git, CI/CD Pipelines, REST API

Education

London School of Economics (LSE)

Pre-Doctoral in Economics

09/2023 - 10/2024

- Courses: Asset Pricing (PhD), Advanced Econometrics (PhD)

University of Munich

M.Sc. in Quantitative Economics

09/2021 - 08/2023

- Courses: Machine Learning in Econometrics, Data Analytics, Experimental Methods, Finance


Sharif University of Technology

B.Sc. in Electrical Engineering



09/2016 - 08/2021

- Courses: Optimisation, Probability & Statistics, Linear Algebra, Signals & Systems, Advanced Calculus

Honors & Awards

- **Silver Medal (2016)** in 10th **International Olympiad** in Astronomy and Astrophysics (IOAA) 
- **Gold Medal (2015) & Silver Medal (2014)** in National Olympiad in Astronomy and Astrophysics

Research & Discussions

- Heterogeneous Effects of Public R&D Spillovers and Structural Change (working paper, 2024) 
- Credit Scoring with Probabilistic Mean-Shift Clustering (working paper, 2021) 
- Dynamic Distributed Optimisation of Energy Consumption: Real-Time Pricing Scenario (working paper, 2021) 
- Economic and public policy analysis research reports on the PolicyEngine page 
- Economic articles in Donya-e Eqtesad newspaper 