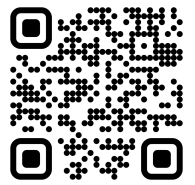


Nima Bahrami Z.



Contact Information

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Other Links: [GitHub](#) | [LinkedIn](#) | [X](#)
Web: [Nimabahrami.github.io](#)

Research Interests

I am interested in the intersection of game theory, optimization, and machine learning to improve decision-making and market mechanisms in renewable energy systems. My work explores how probabilistic modeling and statistical methods can enhance the resilience and efficiency of hybrid renewable energy systems. Additionally, I am keen on new economic frameworks for energy markets, such as blockchain-based energy trading and decentralized energy management.

Experience

| | |
|--------------------------------------|--|
| Energiek Reahus Province Friesland | Led a team of four to solve a Tri-partied challenge of micro grid deployment in Reahus. Developed Game-theoretic model to maximize the social welfare of migrating to islanded energy |
| Freelance Code Interpreter | Providing support with interpreting scientific code (Numerical modeling Optimization) for diversified students Python and Matlab |
| Allame University Merila | Led a research project on thermal comfort assessment in office buildings, utilizing data science techniques to analyze and interpret temperature and humidity data collected from smart sensors using Python. Developed web-application for thermal comfort estimation based on analysis of energy structure of three districts of Tehran toward achieving thermal comfort through optimal strategy |
| Merila Knowledge Enterprise | Developed many features for a telemedicine application through production level python code (FastAPI TensorFlow); designed RDBMS for specific machine learning based features of the application e.g., patient lab results |
| University Tubitak IUST | Investigated the feasibility of blockchain technology for decarbonization of rural electricity, evaluated potential blockchain platforms for energy trading , grid optimization, and carbon reduction, benchmarking their performance against conventional energy management solutions. |
| Tehran Municipality IUST | Conducted experiments and collected data to assess the feasibility and efficiency of different approaches to generating electricity from construction debris. |

Education

| | |
|---|---|
| M.Sc. <i>University of Twente</i> 2024 -2025 | Energy management Thesis: Pricing Mechanisms for Battery Sharing |
| M.Sc. <i>Iran University of Science and Technology</i> 2019-2021 | Mechanical Engineering Focus Area: Energy Systems, Optimization , Mathematical modeling of Hybrid Renewable Energy Systems Thesis: Design and optimization of a hybrid multi-generative renewable energy system and predict its sustainability using artificial neural network (ANN) |
| B.Sc. <i>University of Guilan</i> 2013-2018 | Mechanical Engineering Focus Area: Mechatronics, Thesis: Design and manufacture a 3-DOF camera slider for shooting time-lapse videography with ability to focus on an object |

Publication

Ghandehariun, S., Ghandehariun, A.M., **Bahrami Ziabari**, N. (2024), Complementary Assessment and Design Optimization of a Hybrid Renewable Energy System Integrated with Pumped Hydro Energy Storage with Natural Intake. Renewable Energy

Ghandehariun, S., Ghandehariun, A.M., **Bahrami Ziabari**, N. (2023), Performance prediction and optimization of a hybrid renewable-energy-based multigeneration system using machine learning. Energy

Bahrami Ziabari, N., & Ghandehariun, S. (2021). Investigating the Social Acceptance of Integrating Wind Turbines with Ecotourism Residences: A Case Study of Iran. In The 29th Annual International Conference of the Iranian Society of Mechanical Engineers (ISME)

Bahrami Ziabari, N., & Ghandehariun, S. (2022). Economic Assessment of Solar-based Hydrogen for Methanol Production. Energy Equipment and Systems, 8(3), 263-273

Skills

Python (Advanced), Jupyter, **Machine Learning**, **Optimization** (Proficient in MINLP / Bi-Level | Robust/Stochastic), **SQL**, Matlab, HTML, CSS, Visualization (**StreamLit**, Bokeh),

Certificates

Data Scientist (Associate), Advanced **Optimization**, Energy Markets of Today, Advanced Statistics (Google), HOMER, PVSyst

Awards

→ 8000 GBP ICMA Award
→ 5000 EUR Scholarship University of Twente
→ x2 Gold Medal Speed Skating Iran
→ x1 Provincial Squash Champion