

# SEYED AMIRREZA SALEHI AMIRI

PHD CANDIDATE AT SHARIF UNIVERSITY OF TECHNOLOGY AND A DATA SCIENTIST

## ABOUT

I am Seyed Amirreza Salehi Amiri, a dedicated Ph.D. candidate at Sharif University of Technology, specializing in Industrial Engineering. My expertise lies in the realms of Artificial Intelligence, optimization, and decision-making. I'm passionate about leveraging cutting-edge technology to solve complex problems and drive innovation.

## EDUCATION

### PHD , Industrial Engineering

2023 -

Sharif University of Technology

Supervisor: Dr. Majid Khedmati, Dr. Majid Rafiee

Thesis: Development of a Comprehensive Federated Learning Framework for Load and Solar Power Generation Forecasting in Residential Distribution Networks

Grade:18.45

### Master's Degree, Industrial Engineering

2021 - 2023

Sharif University of Technology

Supervisor: Dr. Majid Khedmati

Thesis: Predicting Imbalanced data using machine learning approaches: A case study of heart patients

Grade: 18.38

### Bachelor's Degree, Industrial Engineering

2017 - 2021

Noshirvani University of Technology

Supervisor: Dr. Arash Nemati

Thesis: Intelligent Transport System

Grade: 17.76

## SKILLS

Research interest	Application Skills
MACHINE LEARNING	OFFICE
DEEP LEARNING	PYTHON
APPLIED STATISTIC	ARENA
SIMULATION	R
OR	DATA ANALYTIC TOOLS
DECISION MAKING	POWERBI

## BIO

### Date of Birth:

15 August 1999

### Email

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[sar.salehiamiri@ie.sharif.edu](mailto:sar.salehiamiri@ie.sharif.edu)

### Phone

+989382049029

### Google Scholar

[Link](#)

### Orchid

0009-0001-8986-8767

### Phone

+09382049029

### Language

Persian, English

### Address

Mazandaran, Babol



## HONORS & AWARDS

- 🥇 Top 4 Nationwide, Ph.D. Entrance Exam – Industrial Engineering (2023)
- 🥇 Top 4 Nationwide, M.Sc. Entrance Exam – Industrial Engineering (2021)
- 🥈 8th Place, National Olympiad in Industrial Engineering (2021)
- 🏅 Recognized Member, National Elites Foundation (Shahid Vezvaei Program) (2025)



## RESEARCH PROJECTS

### 🔴 Emergency Blood Supply Simulation for Mass Casualties

Developed a high-fidelity discrete event simulation model to evaluate logistical strategies for RBC provision under crisis conditions.

Course: *Simulation Models*, 2023

### 🌿 Multistage Stochastic Programming for Agricultural Planning

Integrated scenario reduction with nested decomposition to solve complex uncertainty in the Farmer's Problem.

Course: *Stochastic Programming*, 2021

### 📈 Suicide Trend Analysis in Iran (1995–2016)

Used unsupervised learning and time series mining to identify behavioral and societal risk patterns.

Course: *Data Mining*, 2021

### ⚡ Lagrangian-Based Optimization for Trigeneration Systems with Storage

Formulated an advanced energy planning model incorporating renewable sources and storage under uncertainty.

Course: *Advanced Linear Programming*, 2022

### 🚁 Location Optimization for Air Taxi Skyports

Proposed a prescriptive analytics framework to identify optimal vertiport locations using demand and infrastructure data.

Course: *Industrial Systems Design*, 2023

### 📦 Machine Learning Models for Supplier Selection & Order Allocation

Designed hybrid ML-optimization pipelines for resilient, data-driven supply chain decisions under disruption.

Course: *Supply Chain Management*, 2024

### ⌚ Time Series Forecasting for Renewable Energy Policy & Consumption

Developed predictive models and seasonal pattern analysis to assess renewable energy usage trends and policy impacts through 2024.

Course: *Time Series Analysis*, 2025



## TEACHING EXPERIENCE

Sharif University of Technology

- Teaching Assistant – Data Mining | 2023, 2025, 2025
- Teaching Assistant – Applied Statistics | 2024
- **Lecturer - Principles of Information and Technology - Mazandaran University of Science and Technology - 2025**

## Faradars

- [Federated Learning Course](#)
- [Statistical Learning – Advanced With R](#)
- [Data Mining With R](#)

## Maktabkhoone

- [Data-driven decision making Course](#)
- [Systematic Literature Review Writing: From Basics to Publication](#)
- [Optimizing Machine Learning Models: Theory and Techniques](#)
- Data Mining



## PROFESSIONAL EXPERIENCE

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### Data & Digital Marketing Analyst

Behin Keifiat Shomal, Babolsar, Iran | 2019 – 2020

- Developed data-centric marketing strategies increasing engagement and reach across digital platforms.



## PUBLICATIONS

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## ORIGINAL RESEARCH ARTICLES

1. Amirreza Salehi, Mahdi Alimohammadi, Majid Khedmati, Rouzbeh Ghousi  
**"Spatial-temporal dynamics in country-level sustainable energy performance using ensemble learning and Analytic Hierarchy Process"**  
*Journal of Cleaner Production, 2025, [Q1, IF: 10]*  
❖ Focus: Sustainability analytics, ensemble modeling, energy policy
2. Amirreza Salehi, Ardavan Babaei, Majid Khedmati  
**"Country-level assessment of COVID-19 performance: A cluster-based MACONT-CRITIC analysis"**  
*Applied Soft Computing, 2025, [Q1, IF: 7.2]*  
❖ Focus: Pandemic performance clustering, MCDM
3. Amirreza Salehi, Majid Khedmati  
**"Hybrid clustering strategies for effective oversampling and undersampling in multiclass classification"**  
*Scientific Reports (Nature Portfolio), 2025, [Q1, IF: 4.3]*  
❖ Focus: SMOTE variants, hybrid sampling in imbalanced ML
4. Amirreza Salehi, Ardavan Babaei, Majid Khedmati  
**"Incident duration prediction through integration of uncertainty and risk factor"**

## **evaluation: A San Francisco incidents case study"**

*PLOS ONE*, **2025**, [Q1, IF: 3.3]

❖ Focus: Uncertainty modeling in traffic incident analytics

5. **Amirreza Salehi**, Majid Khedmati

## **"Identifying at-risk patients for congenital heart disease using integrated predictive models and fuzzy clustering analysis: A cross-sectional study"**

*Heliyon*, **2024**, [Q1, IF: 3.4]

❖ Focus: Healthcare prediction, fuzzy clustering, ML in clinical data

6. **Amirreza Salehi**, Ardavan Babaei, Vladimir Simic, Erfan Babaee Tirkolaee

## **"A variation-aware decision support system for tackling COVID-19: A transfer learning and multi-attribute decision-making approach"**

*PeerJ Computer Science*, **2024**, [Q1, IF: 3.8]

❖ Focus: Transfer learning for healthcare crisis decision systems

7. **Amirreza Salehi**, Majid Khedmati

## **"A cluster-based SMOTE both-sampling (CSBBoost) ensemble algorithm for classifying imbalanced data"**

*Scientific Reports (Nature Portfolio)*, **2024**, [Q1, IF: 4.3]

❖ Focus: New ensemble sampling algorithm for classification imbalance

8. **"Network-Based Analysis of National Strategies for COVID-19 Management "**

*iScience*, **2025**, [Q1, IF: 4.1]

❖ Focus: New ensemble sampling algorithm for classification imbalance

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## **REVIEW ARTICLES**

1. Mahdi Alimohammadi, **Amirreza Salehi**, Ardavan Babaei

## **"A comprehensive review of multi-criteria decision-making (MCDM) applications in enhancing textile supply chain management"**

*PrePrints*, **2025**, [Under review]

❖ Focus: Decision models in textile logistics and sustainability

2. **Amirreza Salehi**, Ardavan Babaei, Hojatollah Hamidi

## **"AI-driven strategies for supply chain resilience: A review of challenges and solutions during the pandemics"**

*International Journal of Engineering*, **2025**, [Q2, IF: 1.5]

❖ Focus: Supply chain crisis response through AI and ML

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## **BOOK CHAPTERS**

1. **Amirreza Salehi**, Ardavan Babaei

## **"The Future of Reliability and Safety Science in the Era of Artificial Intelligence"**

In: *Soft Computing in System Safety and Reliability Analysis*

## 🎤 CONFERENCE PRESENTATIONS & PROCEEDINGS

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1. Amirreza Salehi, Majid Khedmati

### "Analysis of the Impact of Renewable Energy, Economic, Governance, and Social Factors on National Sustainability Goals"

📍 10th International Conference on Industrial and Systems Engineering – Civilica, 2024

🗣️ Oral Presentation

2. Mohammadreza Rasouli, Amirreza Salehi, Majid Khedmati

### "Air Taxi Station Location Problem Using Machine Learning and Decision-Making Approaches"

📍 10th International Conference on Industrial and Systems Engineering – Civilica, 2024

🗣️ Oral Presentation

3. Mohammadreza Rasouli, Amirreza Salehi, Erfan Hassannayebi

### "Simulation of the Process of Blood Supply in Mass Accidents and Predicting the Duration of Blood Supply to Patients Using Neural Networks"

📍 10th International Conference on Industrial and Systems Engineering – Civilica, 2024

🗣️ Oral Presentation

4. Mohammadreza Rasouli, Amirreza Salehi, Erfan Hassannayebi

### "Performance Evaluation of Countries and Analysis of Influential Factors in Controlling the COVID-19 Pandemic Using Multi-Criteria Decision-Making Approaches and Machine Learning"

📍 9th International Conference on Industrial and Systems Engineering – Civilica, 2023

🗣️ Oral Presentation

5. Amirreza Salehi, Mohammadreza Rasouli, Erfan Hassannayebi

### "Simulation of the Process of Blood Supply in Mass Accidents and Predicting the Duration of Blood Supply to Patients Using Neural Networks"

📍 7th International Conference on Fundamental Sciences & Engineering – Civilica, 2022

🖼️ Poster Presentation



## EDITORIAL & REVIEWING ROLES

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### Peer Reviewer – 100+ Reviews for High-Impact Journals

Journal Name	Publisher	Quartile (Q)
Annals of Operations Research	Springer	Q1
Decision Analytics Journal	Elsevier	Q1

Journal Name	Publisher	Quartile (Q)
<i>Energy conversion and management</i>	Elsevier	Q1
<i>Evaluation and Program Planning</i>	Elsevier	Q1
<i>Expert Systems with Applications</i>	Elsevier	Q1
<i>Knowledge-based systems</i>	Elsevier	Q1
<i>Scientific African</i>	Elsevier	Q1
<i>Scientific Reports</i>	Nature Portfolio	Q1
<i>Neural Networks</i>	Elsevier	Q1
<i>NeuroComputing</i>	Elsevier	Q1
<i>Iranian Journal of Science and Technology, Transactions of Electrical Engineering</i>	Springer	Q2
<i>Knowledge and Information Systems</i>	Springer	Q2
<i>Iranian Journal of Science and Technology - Transactions of Civil Engineering</i>	Springer	Q2
<i>Journal of Cloud Computing</i>	Springer	Q1
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## Editorial Positions

- **Editorial Board Member**, *Edelweiss Applied Science and Technology Journal* (Q3)
- **Editorial Assistant**, *Scientia Iranica: Transaction E* (Q2)

## 📞 CONTACT & ACADEMIC PROFILES

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- 📍 **Location:** Mazandaran, Babol
- telegram: [@amir27salehi](https://t.me/amir27salehi)

## 🌐 Online Academic Profiles

- 🔎 **Google Scholar:** [scholar.google.com/citations?user=DFUXH1MAAAAJ&hl=en](https://scholar.google.com/citations?user=DFUXH1MAAAAJ&hl=en)
- 🔎 **ResearchGate:** [researchgate.net/profile/Amirreza-Salehi-3](https://researchgate.net/profile/Amirreza-Salehi-3)
- 🔎 **Academia.edu:** [independent.academia.edu/AmirrezaSalehi5](https://independent.academia.edu/AmirrezaSalehi5)
- 🔎 **Scopus:** [Scopus Author ID: 58917738300](#)
- 🔎 **Web of Science:** [Web of Science Author Record](#)
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