

# Negar Arianfar

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## Professional Summary

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Research-driven AI practitioner with a background in Software Engineering and Management, specializing in Reinforcement Learning, environment design, and computational decision systems. Experienced in building custom RL environments, implementing DQN architectures, and translating conceptual AI models into reproducible computational frameworks. Currently expanding into Computer Vision and AI-driven sports analytics systems.

## Work Experiences

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### **Information Technology Consultant, Paya Tajhiz Teb Darman Co., Tehran, Iran, 2014-2023**

Managed and maintained secure IT infrastructure, optimized internal digital workflows, and supported management with technology-driven solutions and system implementation.

### **Web Designer • Freelancer • 2019–2023**

Created responsive websites for small businesses as a freelancer, with focus on modern design, usability, and online visibility. Managed projects independently, communicating with clients and delivering tailored digital solutions.

## Higher Education

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### **Master of Business Management, Hochschule der Wirtschaft für Management (HDWM), Mannheim, Germany, 2023-2025, GPA: 1.81**

- Specialization in International Marketing & Sales with emphasis on global business strategy and market development.

### **Master of Software Engineering, University of Najaf Abad Azad, Esfahan, Iran, 2014–2018**

- GPA: 3.4 out of 4 (16.85/20)

- Focused on software design, system optimization, and advanced programming with research in wireless sensor networks and data efficiency.

### **Bachelor Hardware Engineering, University of Najaf Abad Azad, Esfahan, Iran, 2008–2014, GPA: 2.7 out of 4 (13.40/20)**

- Studied digital systems, computer architecture, and hardware design, with practical experience in embedded systems and electronics.

## Research Interests

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- Deep Reinforcement Learning
- Reward Shaping & Environment Modeling
- Decision-Theoretic AI Systems
- Multi-Agent Systems
- Computer Vision for Action Recognition

## Skills

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### Technical Skills:

- **Programmin:** Python, PyTorch, NumPy, Git
- **Reinforcement Learning:** DQN, Replay Buffer, Target Networks, Custom Environments, Reward Engineering
- **Machine Learning:** Model Training Pipelines, Evaluation Metrics, Experimental Design
- **Computer Vision (Developing):** Video-based Analysis, Event Detection, Sports Analytics

**Research Skills:** Academic Writing, Literature Review, Data Interpretation, Project Management, RL.

**Languages:** Persian (Native), English (Fluent), German (A2 – improving).

## Selected AI Projects

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### MiniChess-RL (2025)

Designed and implemented a custom 4×4 MiniChess environment and Deep Q-Network (PyTorch) with replay buffer, target network, and structured reward system. Full experimental pipeline documented and published on GitHub.

### Artaki – AI Martial Arts Match Analysis (Ongoing)

Developing a Computer Vision-based system for automated match analysis and event detection. Exploring integration of RL-based strategy modeling.

### Arian AI-Chessboard Model

Conceptual AI-driven strategic decision framework combining game theory and computational modeling.

Full project portfolio: [github.com/negarinarianfar](https://github.com/negarinarianfar)

## Publications

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## Books & Authored Works

- **Arianfar, N.** (2021,2025). Chessboard of Business (Revised and Expanded Edition). Amazon KDP, ISBN: 979-8269053646 and Persian Edition Atran Publication Corporation, Tehran, Iran. ISBN: 978-622-7850-15-4.

**Arianfar, N.** (2026). Learning Reinforcement Learning Through Projects: From Zero to Your First Deep Q-Network. Amazon KDP, ISBN: 9798249128067.

## Manuscripts Submitted / Under Review

**Arianfar, N.** (2026). Business Chessboard Strategy: A Conceptual Framework for AI-Driven Strategic Decision-Making in Strategic Business Research Journal (Under review).

- **Arianfar, N.** (2025). Conceptual Reinforcement Learning Architecture for Strategic Decision Systems. In Preparation for submission.
- **Arianfar, N.** (2026). Reinforcement Learning-based Adaptive Cluster Head Selection in Wireless Sensor Networks. In Preparation for submission.

## Conferences Papers

- **Arianfar, N., & Daneshvar Farzanegan, S.M.** (2018). *A New Energy-Efficient Clustering Method for Wireless Sensor Networks*. Presented at the 4th National Conference on Electrical Engineering of Iran, Islamic Azad University, Najafabad Branch, Isfahan, Iran, February 27–28, 2018. (*Peer-reviewed conference*)

## Assistantships

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Webinar “*From Idea to a Successful Startup*” Instructor, in [Eseminar.tv/wb17803](https://www.eseminar.tv/wb17803), Tehran, Iran, 2020

## Honor and Awards

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- Merit-based admission to B.Sc. programs in Hardware Engineering through competitive entrance exams of Islamic Azad University, Esfahan, Iran, 2008.
- Merit-based admission to M.Sc. programs in Hardware Engineering through competitive entrance exams of Islamic Azad University, Esfahan, Iran, 2015.
- Admitted to Hochschule der Wirtschaft für Management (HDWM), Mannheim, Germany – after successful interview and academic evaluation, 2025.

## Selected Workshops/Courses Certificates

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- **AI & Cloud Certifications (Google, University of Helsinki – 2025)**
  - Introduction to Generative AI & Gemini for Cloud Architects – *Google Cloud Skills Boost*
  - Machine Learning Crash Course – *Google Developers (Classification, LLMs, Numerical Data,*

*Production ML Systems)*

- Elements of AI – *University of Helsinki & MinnaLearn (Certificate of Completion, Oct 2025)*
- Google Project Management Professional Certificate – *Coursera (Aug 2025)*
- Member, Google Women Techmakers & Google Cloud Innovators
- Offline Media Publication License, Ministry of Culture and Islamic Guidance, Iran, 2022.
- Introductory Course in Java and Android Programming, Jihad Daneshgahi (ACECR Institute), Isfahan, Iran, 2017.
- Information Security and Computer Networks, Islamic Azad University, Najafabad Branch – Faculty of Computer Engineering, Isfahan, Iran, 2014.

## Volunteering and Extracurricular Activities

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- **Pro Bono IT Consulting:** Supported small local businesses and student projects with digital tools, free of charge, to help them grow and improve efficiency.
- **Community Workshops:** Shared knowledge of project management, programming (Python, Java), and business modeling with university students and early-stage entrepreneurs.
- **Volunteer Martial Arts & Fitness Coach:** Led free kickboxing and fitness workshops for youth and women and Guided teenagers in teamwork, confidence, and resilience through martial arts training (2018–present).

## References

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References available upon request