

SAEID POULADCHANG

Data Scientist | Industrial AI Engineer

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Data Scientist and Industrial AI Engineer specializing in Deep Reinforcement Learning and Operations Research. Proven track record of building AI agents that optimize supply chains and reduce operational costs, including a recent RL-driven inventory engine that generated a +10.2% profit increase. Adept at bridging the gap between industrial engineering principles and cutting-edge machine learning.

TECHNICAL EXPERTISE

- **Machine Learning & AI:** Deep Reinforcement Learning (DQN, DDQN, Dueling DQN), PyTorch, TensorFlow, Scikit-learn, NLP, Computer Vision.
- **Engineering & Strategy:** Operations Research, Supply Chain Optimization, Constraint Optimization (Z3), Critical Path Method.
- **Software Engineering:** Python, SQL, Git, Docker, Flask, Streamlit, Cloud Deployment (Render/PaaS).
- **Business & Analytics:** Financial Analysis, Data-Driven Decision Making, KPI Development.

PROFESSIONAL EXPERIENCE

Freelance Data Scientist & AI Consultant
Self-Employed

Feb 2022 – Present
Remote

- **Supply Chain AI (Real-World Application):** Built a **Double DQN agent** to autonomously learn optimal ordering strategies for frozen goods under stochastic demand. Applied the model to a real-world restaurant database, achieving a **+10.2% profit increase** and a **-15% waste reduction** compared to traditional heuristics. Currently expanding the architecture to develop multi-agent decision-making systems for other operational sectors of the restaurant. [[Live Demo](#)] | [[GitHub](#)]
- **ML Lab Notes (Academic Freelance Project):** Designed and deployed predictive models and machine learning pipelines for various academic projects. Engineered a comprehensive empirical study training 10 distinct neural network architectures to analyze the mathematical impact of weight initialization (e.g., He vs. Random), activation functions (ReLU vs. Sigmoid), feature scaling, and optimizers on vanishing gradients and model convergence. [[GitHub: ml-lab-notes](#)]

Project Control Expert
Anbooh Gostar Nasr

Nov 2021 – Jan 2022
Yazd, Iran

- Applied critical path analysis and constraint-based scheduling (Microsoft Project) for project optimization.
- Managed inventory cost forecasting and delay analysis to justify project timelines legally and contractually.

Co-Founder & Operations Lead

Ketabgardi Startup

Oct 2020 – Oct 2021

Yazd, Iran

- Led the product strategy and operational planning for a peer-to-peer platform (secured 2nd place at National Startup Festival).
- Analyzed market constraints and logistics costs, ultimately making strategic pivot/halt decisions based on data.

AI PROJECTS & OPEN-SOURCE CONTRIBUTIONS

Open-Source Contributions: "Today I Learned" (TIL) Repository

[[GitHub Repository](#)]

Self-contained technical documentation on ML research and architectures

- Authored an open-source, structured roadmap for building end-to-end Machine Learning pipelines using TensorFlow/Keras.
- Translated complex theoretical concepts—such as optimizer dynamics (Adam, RMSprop), classification loss functions, and network architectures—into minimal, reproducible experiments to aid the academic and developer community.

Autonomous Controller - MountainCar

[[Live Demo](#)] | [[GitHub](#)]

Continuous control optimization in sparse-reward environments

- Designed a Dueling DQN architecture, achieving a 98% success rate in sparse-reward continuous control tasks.
- Solved challenging kinematics problems using Python, Gymnasium, and Streamlit.

EDUCATION

MSc Engineering Technology (Strategos)

Università degli Studi di Genova

Sep 2024 – Present

Genoa, Italy

BSc Industrial Engineering

Yazd University

Sep 2017 – Feb 2022

Yazd, Iran

LANGUAGES

- **English:** Full Professional
- **Italian:** Limited Working