

# HADI AGHAZADEH

Databricks Certified Machine Learning Engineer, Author of "RL for Business"

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 Permanent Residency Candidate (Got ITA and in the process of obtaining PR), Status: Open Work-permit and Study Permit



## WORK EXPERIENCE

### Machine Learning Engineer (Full Time / Remote)

#### Bits in Glass

 April 2024 – Current

 Calgary, Canada

- Automated Invoice Text Extraction:** Owned design and deployment of an end-to-end solution for extracting and formatting information from large batches of PDFs using LLMs and Langgraph inside Databricks (Mosaic AI, Mlflow). Employed state-of-the-art techniques for structured output generation and guided formatting, ensuring high accuracy and reliability in automating invoice processing.
- Dynamic Fuel Pricing Optimization:** Developed a robust ML pipeline utilizing Reinforcement Learning and Linear Programming to track, predict, and optimize fuel prices in real time. Implemented and deployed the solution on Databricks, enabling seamless integration and efficient pricing strategies.
- Voice-Assisted Chatbot for Home Tours:** Designed and deployed an AI-powered assistant on AWS using LLMs and RAG to deliver real-time, accurate responses on rental properties and policies. Integrated LangChain with a React-based UI and served the model via Amazon SageMaker.

### Machine Learning Developer (Full Time / Hybrid)

#### AltaML

 May 2023 – September 2023

 Calgary, Canada

- Hybrid Fuel Demand Forecasting Model:** Contributed to the development of a scalable forecasting model for over 100 sites. Achieved annual savings exceeding \$1M by successfully implementing the model.

### Senior Data Scientist (Full Time / Hybrid)

#### Snapp (The biggest ride-hailing startup in the Middle East)

 May 2021 – June 2022

 Tehran, Iran

- Dynamic Surge Pricing:** Led a project leveraging Reinforcement Learning for dynamic surge pricing, improving the Order Fulfillment Rate by approximately 5% (~200K orders/day).
- Fraud Detection Optimization:** Directed the development of an unsupervised machine learning solution for fraud detection, saving 300 labor hours per month while achieving over 90% detection recall.

### Data Scientist (Full Time / In-Person)

#### Fanap (PARSA)

 January 2018 – April 2021

 Tehran, Iran

## RL BOOK

### Reinforcement Learning for Business

Manning Publications

 2025



- Practical RL techniques tailored for business operations.

 Book page at Manning

## EDUCATION

### Ph.D. Candidate; GPA: 4/4

#### University of Calgary

 July 2022 – Expected Graduation: Oct 2025

Research: RL for Vehicle Routing

### M.Sc. in Industrial Engineering

#### Amirkabir University of Technology

 2015 – 2018

### B.Sc. in Industrial Engineering

#### Iran University of Science and Technology

 2011 – 2015

## SKILLS

Python

Databricks

AWS

PyTorch

Langchain

Git

MS Azure

Hard-working

Eye for detail

Motivator & Leader

Public Speaking

## LANGUAGES

- **ATM Demand Forecasting and Optimization:** Led the development of an end-to-end solution for ATM demand forecasting (achieving ~17% Mean Absolute Percentage Error) and optimization models for replenishment strategies, resulting in a significant ~10% reduction in operational costs.

## PUBLICATIONS

### Books

- H. Aghazadeh, *The Deus Machine, A novel for learning Machine Learning*. In English, [Click to Download](#), 2022.
- H. Aghazadeh, *Continues Improvement National Team*. In Persian, Rasa Publication, [Book Link](#), 2017.

### Journal Articles

- H. Aghazadeh, Y. Wang, S. Sun, and X. Wang, "Dray-q: Demand-dependent trailer repositioning using deep reinforcement learning," *Transportation Research Part C: Emerging Technologies*, IF: 9.2, Q1, 2023.

### Conference Proceedings

- H. Aghazadeh and W. Xin, "Hierarchical reinforcement learning for real-time policy optimization in complex logistics networks," in *ACM KDD 2025*, Toronto, Canada, 2025.
- H. Aghazadeh and X. Wang, "Reinforcement learning for inter-modal transportation planning with time windows and limited cargo capacity," in *16th ACM SIGSPATIAL International Workshop on Computational Transportation*, Hamburg, Germany, 2023.

## TEACHING EXPERIENCES

Contextual Multi-Armed Bandit Problems in Python.

[Udemy](#)

- Covers key algorithms in Contextual MAB. [Course Link](#)

Reinforcement Learning for operations research.

[Udemy](#)

- Bridged traditional Operations Research methods with innovative Reinforcement Learning techniques. [Course Link](#)

Teaching Assistance: Data Mining and Databases

[University of Calgary](#)

- Assisted in the "Data Mining and Databases" course at UClagay.

## VOLUNTEER EXPERIENCES

Vice President and Student Representative

[University of Calgary: Graduate Geomatics Group \(G<sup>3</sup>\)](#)

□ 2023-2024

📍 Calgary, Canada

- Led graduate engineering geomatics Engineering group (50+ members) at the University of Calgary, driving collaboration initiatives that improved student engagement by 40%.

English



Persian



## HONORS AND AWARDS

Alberta Innovate Scholarship

[Alberta's most prestigious academic awards](#)

□ 2024

Awarded \$31,000 per year for two years in recognition of academic excellence and research impact.

Open Doctorial Scholarship

[University of Calgary](#)

□ 2024

Awarded a total of \$15,000 in recognition of academic achievements and research contributions.

First Place in Amii Reinforcement Learning Competition

[Upper Bound 2024 Conference by Amii](#)

□ 2024

Achieved first place in the Reinforcement Learning competition hosted by Amii.

Schulich Leadership for Engineers Catalyst Program

[University of Calgary](#)

□ 2023

Trained by top entrepreneurs and awarded \$2,500 commercialization of research ideas.

First Place in AI Competition

[Amirkabir University of Technology](#)

□ 2018

Secured 1st place in a Demand Forecasting Competition, outperforming 150 teams.

## CERTIFICATES

Databricks Certified Machine Learning Associate

[Databricks](#)

□ 2024

Earned certification after extensive hands-on experience with Databricks.

[View certificate](#)

Reinforcement Learning Specialization

[University of Alberta | Coursera](#)

□ 2022

Completed all modules of the Reinforcement Learning Specialization. [View certificate](#)