

# Armin Moradi (he/him)

## Machine Learning Engineer / Data Scientist

[linkedin](#) • [github](#) • [website](#)

### PROFESSIONAL EXPERIENCE

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#### Machine Learning Intern

Jul 2024 – Present

CEIMIA, Montréal, Canada

Quebec's leading organization in the responsible development of artificial intelligence (~10 tech employees).

- Conducting literature review and developed novel metrics for Discoverability in Music Recommender Systems, fairness, and diversity, ensuring alignment with ethical AI principles.
- Collaborating with interdisciplinary teams and refined publicly available datasets, implementing and evaluating prototype-based recommender systems to enhance explainability and mitigate unfairness.
- Documenting research processes, contributing to research articles, and participating in bi-weekly project management meetings and interdisciplinary workshops.

#### Machine Learning Researcher

Jan 2023 – Present

Mila, Montréal, Canada

- Member of the EQUAL Lab, conducting research on Fairness and Cultural alignment in Recommender Systems
- Leading a project in a team of 3 on Cultural Music Discoverability: led to several oral presentations and a scientific article
- Leading a project on Biases of Conversational Recommender Systems: led to publishing in the ACM RecSys Workshops
- Selected to collaborate with artists in *co-creating with arts and AI* residency to visually represent cognitive sensations through AI generative models

#### AI Student Researcher (Full-time)

July 2021 – Oct 2021

Technische Universität München, Munich, Germany

- Independently conducted a project on mapping the visual status of robot-assisted ophthalmic surgery to pleasant audio signal for the surgeons
- Adapting Variational Autoencoders to conduct audio-style transfer on MIDI signals while taking musical and informational constraints into account by conducting literature review and utilization of Google Magenta project.

#### Data Scientist (Full-time)

Jun 2020 – April 2022

Balad Maps (Café Bazaar), Tehran, Iran

Most popular maps and navigation application in Iran with +10 million monthly active users (~80 tech people)

- **Search and Exploration Team Member:** Focused on guiding users to their points of interest through the development, A/B testing, deployment, and maintenance of recommender systems and NLP models.
- **Key Projects:**
  - *Destination Recommenders:* Developed a system that reduced 'navigation start duration' by 18% for the top 25% most-active navigation users.
  - *Auto-Correction Modules:* Improved the click-rate for the 10%-least successful queries by 6%.
  - *Trending Queries Module:* Increased user interactions with the search module by 4%.
- **Database Schema Redesign:** Re-designed the schema to meet the growing demands of data-driven projects, resulting in a 60% reduction in time and energy spent on the top 20 most-repetitive HDFS queries.
- **Volunteer Process Coordinator:** Enhanced development processes, achieving a 27% improvement in user-story prediction accuracy, which facilitated more reliable sprint planning and reduced task retakes by 20%.
- **Interview and On-boarding Process:** Contributed to redefining the Data Science Chapter's interview and onboarding processes, leading to the hiring of four new team members and mentoring two mentees within four months.

#### Machine Learning (Intern)

Feb 2019 – Mar 2019

Rahnema College, Rahnema, Tehran, Iran

Prestigious technology education center (~200 employees, ~10 mentors, ~25 mentees)

- Selected among 3000 applicants and granted a scholarship for training
- Undergone 200 hours of Machine Learning Theory and Practice. Machine Learning Fundamentals, CNNs, Feature Engineering, Apache Spark, Agile methodology and soft-skills workshops
- Conducted Few-shot [Whale Identification Challenge](#) in a team of 5 ML interns: 74% accuracy (highest among the interns)

## EDUCATION

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### Université de Montréal / Mila Quebec AI Institute

Jan 2023 – Jan 2025

Master of Science – Computer Science (Artificial Intelligence Specialization)

### Sharif University of Technology

Sep 2017 – July 2022

Bachelor of Science – Computer Engineering

*Thesis: Evaluating the Robustness of DP-SGD Trained Recommender Systems Against Black-Box Inference Attacks*

## PUBLICATIONS AND TALKS

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[1] **Armin Moradi**, Nicola Neophytou, and Golnoosh Farnadi. "Advancing Cultural Inclusivity: Optimizing Embedding Spaces for Balanced Music Recommendations". In: Submitted to ACM RecSys'24. 2024.

[2] **Armin Moradi** and Golnoosh Farnadi. "Tidying Up the Conversational Recommender Systems' Biases". In: Knowledge-aware and Conversational Recommender Systems (KaRS) Workshop at ACM RecSys'23 - Oral Presentation.

[3] Oral Presentation. "A Tutorial on Fairness in Machine Learning". In: Trustworthy and Responsible AI Learning (TRAIL) program of Mila's AI for Humanity department. 2023.

[4] Oral Presentation. "A Tutorial on Fairness in Machine Learning". In: Johannes Kepler University, Linz, Austria University. 2024.

## SKILLS

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**Programming Languages:** Python, C, Java, Scala | **Machine Learning:** PyTorch, TensorFlow, Keras, TFX, Scikit-Learn, OpenCV, NumPy, Pandas | **Engineering:** Docker, Apache Airflow, Apache Spark, SQL, Version Control (Git) | **Data Visualization:** Apache Superset, Metabase | **Selected Courses:** Responsible AI, Reinforcement Learning, Representation Learning, Statistical Machine Learning, Advanced Information Retrieval | **Languages:** English (C2), French (B1), German (A2), Persian (Native), Familiar with Arabic, Turkish

## HONORS AND AWARDS

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- 2024
  - Mitacs Excellence Scholarship (8 Units of \$15,000 CAD each) for conducting the project "Interdisciplinary design of music recommender systems for the enhancement of discoverability of under-represented music cultures".
  - Residency grant of [co-creating with arts and AI](#): \$5,000 CAD
  - Bourse en intelligence artificielle des ESP, Université de Montréal: \$5,000 CAD
  - Travel Grant, Responsible AI conference track, Canadian AI 2024 conference, NSERC: \$1,160 CAD
  - Travel Grant, 2nd IEEE Conference on Secure and Trustworthy Machine Learning: \$1,000 USD
  - Scholarship for Foreign Master's Students, DIRO, UdeM: \$4,000 CAD
- 2023
  - Ministry of Higher Education Scholarship for International Students, DIRO, UdeM: \$3,000 CAD
  - Full-funding for Research Master's Studies, Mila Quebec AI Institute: \$27,000 CAD per year (2 years)
- 2021
  - International Undergraduate Excellence Awards, Chair for Computer Aided Medical Procedures, Technical University of Munich: €5,000
- 2017
  - Grant for Undergraduate Studies for Outstanding Academic Success, National Elites Foundation, Iran
  - Ranked 24th nationwide (~200k participants) in Iran's Nationwide Mathematics University Entrance Exam; 1st among 40k in underdeveloped regions

## HOBBIES

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- Improvisation and Composition in Jazz and Persian Music
- Street Photography ([unsplash.com/@armor9](https://unsplash.com/@armor9)), Basketball, Long Runs and other randomly connected stuff.