Armin Moradi

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EDUCATION

Université de Montréal / Mila - Quebec AI Institute Jan 2023 – Dec 2024
Master of Science – Computer Science (AI Specialization)
Thesis: Mitigating Popularity Bias in Recommender Systems with a Cultural Lens

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

PROFESSIONAL EXPERIENCE

Machine Learning Research Intern Jul 2024 – Present
CEIMIA, Montréal, Canada
Quebec's leading organization in the responsible development of artificial intelligence

- Evaluated existing discoverability metrics and collaborated with media experts to propose new metrics.
- Developed methods to enhance the discoverability of Quebecois content in various music recommender systems.
- Co-led the creation of a public recommendation dataset with Deezer Research, adhering to data governance standards.

Machine Learning Student Researcher Jan 2023 – Present
Mila, Montréal, Canada

- Focusing on cultural fairness and explainability of (conversational) recommender systems and multilingual LLMs.
- Participated in an 8-week AI and arts residency (cocreating.art) to explore video and music generative models.

Machine Learning Student Researcher July 2021 – Oct 2021
Technische Universität München, Munich, Germany

- Using VAEs to design a MIDI style-transfer module for visual status representation in robot-assisted surgery.
- Adapted Generative Models for audio-style transfer, leveraging the Google Magenta project.

Data Scientist (Full-time) Jun 2020 – April 2022
Cafe Bazaar (Balad Maps Section), Tehran, Iran
Maps and navigation application with 10+ million monthly active users (~80 tech people)

- Search and Exploration Team Member: Developed, A/B tested, deployed, and maintained recommender systems and NLP models.
- Key Projects (Tools: Apache Spark, Apache Airflow, Docker, MLFlow):
  - *Destination Recommendation:* Reduced navigation start duration by 18% for the top 25% active users through personalized recommendations.
  - *Query Auto-Correction:* Increased click rate by 6% for the 10%-least successful queries.
  - *Trend Detection on Search Queries* (time-series prediction): Boosted user interactions with the search bar by 4%
  - Redesigned database schema and implemented ETLs, reducing compute time of top 20 HDFS queries by 60%.
- Redesigned the interview and onboarding processes, hiring four new data scientists and mentoring two

Machine Learning Fellowship Feb 2019 – Mar 2019
Rahnema College, Tehran, Iran
0.8% Acceptance rate (~200 employees, ~10 mentors, ~25 mentees)

- Completed 200+ hours of intensive ML practice in CNNs, feature engineering, Apache Spark, and software testing.
- Led a team of 5 ML interns to achieve the highest accuracy (74%) in a Few-shot Whale Identification Challenge.

PUBLICATIONS

[1] **Armin Moradi**, Nicola Neophytou, Florian Carichon, and Golnoosh Farnadi. "Embedding Cultural Diversity in Prototype-based Recommender Systems". 2024. Accepted at ECIR'25.
[2] **Armin Moradi** and Golnoosh Farnadi. "Tidying Up the Conversational Recommender Systems' Biases". 2023. Knowledge-aware and Conversational Recommender Systems, ACM RecSys'23.

SKILLS

Programming Languages: Python, C, Java | **Machine Learning:** PyTorch, Tensorflow, Keras, Scikit-Learn, NumPy, Pandas, WandB, Ray
Engineering: CUDA, Docker, Apache Airflow, Apache Spark, SQL, Git, CI/CD| **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)

AWARDS and SERVICES

- 2024
  - Mitacs Accelerate Fellowship: 4 x 15,000 CAD
  - Co-organizing NewInML, and Volunteering in Creativity and Generative AI Workshops @ NeurIPS'24
  - 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: C$1,160
  - Travel Grant, 2nd IEEE Conference on Secure and Trustworthy Machine Learning: $1,000
  - 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: 31,000 CAD per year (2 years)
- 2021
  - International Undergraduate Excellence Awards, CAMP, Technical University of Munich: €5,000
- 2017
  - Grant for Outstanding Academic Success: Awarded by the National Elites Foundation.
  - National Mathematics Entrance Exam: Ranked 24th among ~200,000 participants; 1st in ~40,000 from underdeveloped regions.

MISC.

When I'm outside, I enjoy taking photography walks and taming my competitive spirit by playing basketball. Indoors, I sometimes improvise and compose Persian and Jazz music. I often lose myself in playing the bass early in the evenings.