

Arman Behnam

Computer Science PhD Student at Illinois Institute of Technology

☎ +1 312 539 8781 | ✉ Email | </> LeetCode | 🔗 LinkedIn | 🐙 GitHub | 🌐 Website | 📍 Chicago, IL, USA

EDUCATION

Illinois Institute of Technology

Chicago, IL, USA

Computer Science Ph.D. student; College of Computing, Department of Computer Science

January 2023 – Present

Research subject: Generalized Causal Representation Learning; **GPA: 3.20**

Advisor: Binghui Wang

Relevant coursework: Computer Organization and Assembly Language Programming, Systems Programming, Science of Programming, Software Systems Architectures, Algorithms, and Operating Systems

Iran University of Science and Technology

Tehran, Iran

M.Sc. in Industrial Engineering; **GPA: 3.44**

September 2018 – March 2022

Dissertation title: “Railway data mining using deep learning with IoT approach”

University of Tehran

Tehran, Iran

B.Sc. in Industrial Engineering; **GPA: 3.17**

September 2014 – July 2018

Final project: “Integrating modern tools for long-term production planning”

PUBLICATIONS

Measure-Theoretic Anti-Causal Representation Learning

Video, Code, Poster

39th Conference on Neural Info. Processing Sys., August 2025 (Second year’s Ph.D. Research)

- A measure-theoretic framework for anti-causal representation learning through two-level abstraction, supporting both perfect and imperfect interventions with theoretical guarantees for out-of-distribution generalization.

Causal Explanation from Mild Cognitive Impairment Progression Using GNNs

Video, Code

International Conference on Bioinformatics and Biomedicine, December 2024 (Internship Research)

- Explore potential causal explanation of MCI progression by temporal patient data, including chronic diseases, biomarkers, and genetic information, into a graph structure to capture causal effects within variables.

Graph Neural Network Causal Explanation via Neural Causal Models

Video, Code, Poster

18th European Conference on Computer Vision, July 2024 (First year’s Ph.D. Research)

- A GNN causal explainer by building causal structure and the corresponding neural causal model for a graph. It outperforms the existing GNN explainers in exactly finding the ground-truth explanations.

Artificial intelligence-enabled Internet of Things Technologies in Modern Energy Grids

A book chapter from IoT Enabled Multi-Energy Systems, Academic Press, January 2023

- New AI-based IoT frameworks concentrating on architecture, and challenges of energy internet.

Data Science Leverage and Big Data Analysis for Internet of Things Energy Systems

A book chapter from “IoT Enabled Multi-Energy Systems”, Academic Press, January 2023

- Smart grid intelligence protocols with attention to data-driven decision-making, and real-time data collection.

A Data Analytics Approach for COVID-19 Spread and End Prediction (Case Study in Iran)

Journal of Modeling Earth Systems and Environment, January 2021

- COVID-19 confirmed, and recovered cases trend prediction in short-time, and long-term scenarios by time series methods fine-tuned by Gaussian functions for a case study of Iran

Meta-Health Stack: A New Approach for Breast Cancer Prediction

Healthcare Analytics, November 2022

- An ensemble-based framework for predicting breast cancer with high performance

A Study on IOT Applications and Technologies in Logistics

A book chapter from “Logistics and Supply Chain Management”, Healthcare Analytics, December 2020

- Analysis to determine the applications of IOT in logistics such as WSN, RFID, and GIS.

A Comparison Between Different Classification for Predicting Metastasis in Breast Cancer

IIIEC 2021, March 2021

- Comparison of different fine-tuned ML methods for cancer metastasis cases prediction,

RESEARCH EXPERIENCE

Generalized Causal Representation Learning <i>Under writing, March 2025 –present</i>	Ph.D. Research
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ACADEMIC EXPERIENCE

Grading programming assignments, and the final project <i>"Data privacy and security" CS528, and "Introduction to Data Structures by Java"CS401</i>	Teaching Assistant
American Journal of Lifestyle Medicine, SAGE Journals	Editorial Board
The Journal of Primary Prevention, Journal of General Internal Medicine	Peer Reviewer

WORK EXPERIENCE

Quis, Inc. <i>AI Engineer</i>	New York, NY, USA <i>July 2025 – Present, Part-time</i>
Clarkwestern Dietrich Building Systems LLC <i>AI Engineering Internship</i>	Merrillville, IN, USA <i>May 2025 – August 2025, Full-time</i>
Mayo Clinic <i>AI Research Scientist Internship (Department of Artificial Intelligence (AI&I))</i>	Rochester, MN, USA <i>May 2024 – August 2024, Full-time</i>
Tanzim-Yar (Reg-Tech) Startup Studio <i>Data Analyst</i>	Tehran, Iran <i>April 2021– December 2022, Full-time</i>

SKILLS

Languages: Python, C, Java, SQL, R, MATLAB, Assembly, VBA
Frameworks & Libraries: PyTorch, TensorFlow, Keras, Scikit-Learn, FastAPI, OpenCV, Hugging Face Transformers, LangChain, spaCy, NLTK, LLM APIs, LangGraph, n8n
Technologies & Tools: Docker, Kubernetes, Git, MLflow, Ray, AWS SageMaker, Azure ML, Weights & Biases, DVC, MySQL, PostgreSQL, Pinecone, LlamaHub, n8n, Azure DevOps, Lucid
ML/AI Expertise: LLMs, Causality, RAG, Fine-Tuning, Transfer Learning, Neural Networks, Computer Vision, NLP, Generative AI, MLOps, Embeddings

PROJECTS

My Leetcode and Solutions GitHub	in Python and Java
Hands on OCR and ReGex Pattern Matching GitHub	Modular Document Processing Engine
Threads and User Programs in OS GitHub	Bochs and QEMU within the Docker environment image
Stock Prediction GitHub	US stock prices prediction via LSTM, GRU, ensemble, and attention models

HONORS AND AWARDS

ECCV24 Paper Lightning Talk and Poster Presentation <i>Toyota Technological Institute at Chicago</i>	2024 NSF TRIPODS Workshop <i>December 7th, 2024</i>
ECCV24 Paper Lightning Talk and Poster Presentation <i>Purdue University</i>	9th Midwest Security Workshop <i>November 16th, 2024</i>
ECCV24 Poster Presentation <i>Northwestern University</i>	NSF Site Visit (IDEAL) <i>September 18th, 2024</i>
Ph.D.'s First Year Talk <i>Northwestern University</i>	NSF Site Visit (IDEAL) <i>October 12th, 2023</i>

CERTIFICATES

Reinforcement Learning, by University of Alberta (80 hours)	November 2021
Natural Language Processing, by DeepLearning.AI (120 hours)	August 2021
Excel Skills for Data Analytics, by Macquarie University (40 hours)	March 2021
Deep Learning, by DeepLearning.AI (120 hours)	November 2020