

# Eylam Tagor

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## EDUCATION

### Columbia University

*M.S. in Computer Science, GPA: 3.81*

New York, NY

Exp Dec 2025

- Advisor: Elias Bareinboim
- Relevant Courses: Causal Inference, Natural Language Processing, LLMs, Advanced Deep Learning, Databases
- Teaching: Reinforcement Learning (Fall 2025), Causal Inference for Data Science (Spring 2025)

### The University of Texas at Austin

*B.S. in Computer Science, GPA: 3.93*

Austin, TX

May 2024

- Relevant Courses: Artificial Intelligence, Machine Learning Theory, Neural Networks, Algorithms & Complexity

## SKILLS

**Languages**: Python, C/C++/C#, R, Java, Swift, JavaScript, MATLAB, HTML5/CSS, SQL, Bash/Shell scripting

**Tools & Frameworks**: PostgreSQL, PyTorch, Pandas, Scikit-learn, Anaconda, NumPy, ROS, version control systems, Git, GitHub, GitLab, Docker, Kubernetes, Firebase, AWS, Linux/Unix, TensorFlow, QEMU, Spark, Hadoop, GCP

## RESEARCH/PUBLICATIONS

**Tagor, E., Li, M., & Bareinboim, E. (2025). CILBench: Benchmarking Robust Imitation Learning in Confounded High-Dimensional Control Environments. Preprint, under submission. Columbia University.**

- Developed imitation learning algorithms that utilize causal inference theory for behavioral cloning and inverse RL.
- Parameterized classic RL environments as SCMs with latent confounders and partial observability.
- Introduced a novel benchmark for imitation learning measuring robustness in complex embodied tasks.
- Demonstrated that causal algorithms successfully reach expert performance while state-of-the-art algorithms fail.

### NVIDIA AI Research Collaboration (Embodied RL)

- Devised embodied agent and training environment using OpenAI Gym using multimodal input to play diverse games.
- Worked in a group led by Dr. Jim Fan and Dr. Anima Anandkumar leveraging modern RL algorithms, LLMs, and large-scale pre-training from internet data to improve agent decision-making and performance across varied tasks.

### Residual Neural Causal Model for STEM Academic Performance (Causal DL)

- Proposed ResNCM, a novel Neural Causal Model using Python, PyTorch, Causal-Learn and DoWhy.
- Performed counterfactual analysis on exam scores (30K samples) and personalized learning data (10K samples).
- Outperformed classical and DL baselines and revealed insights such as a direct causal effect of gender on math scores.

## PROFESSIONAL EXPERIENCE

### Sandia National Laboratories

*Software R&D Intern*

Albuquerque, NM

Jun 2025 – Aug 2025; May 2023 – Aug 2023

- Engineered an unsupervised ML pipeline for detecting performance anomalies in production HPC systems.
- Designed a machine learning model to classify satellite footage using deep computer vision.
- Created data flow algorithms using Hadoop and Spark to manage migration and querying of volatile 10 TB dataset.

### Learning Agents Research Group at UT Austin

*Research Assistant*

Austin, TX

Jan 2024 – May 2024

- Implemented multi-agent deep RL algorithms for humanoid robots to play 5-on-5 soccer.
- Developed a simulation environment to train policies for various behaviors: passing, kicking, diving, etc.
- Won 1<sup>st</sup> place in the 2024 RoboCup Standard Platform League's Challenge Shield Division, led by Dr. Peter Stone.

### Big Data in Biology Lab at UT Austin

*Research Assistant*

Austin, TX

Jan 2022 – Dec 2022

- Developed dimensionality reduction and clustering algorithms to identify genes responsible for cancer aggressiveness.
- Experimented with ML & data science methods to predict relevant gene pathways given RNA sequencing data.
- Discovered novel pathways strongly correlated with persister melanoma, leading to further research on treatments.

### Unlimited Robotics

*Software Engineer Intern*

Tel Aviv, Israel

Jun 2022 – Aug 2022

- Built a generalist robotic agent to assist humans in hospital and hotel tasks based on ROS and Python.
- Designed an adaptive pathfinding algorithm using LiDAR and multiple cameras and learning in real-time.
- Equipped agent with fine-tuned object recognition model enabling live tracking and physical interaction with targets.
- Assembled virtual simulation environment to train and test agent behaviors using Unity.