

# ABITHA THANKARAJ

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## RESEARCH INTERESTS

Deep learning, Representation Learning, Sequential Decision Making, Large Language Models, Multimodal

## EDUCATION

### Doctor of Philosophy, Computer Science

2023 -

School of Computer Science, Carnegie Mellon University, Pittsburgh, PA.  
Advisor: Yonatan Bisk

### Master of Science, Computer Science

2021 - 2022

Courant Institute of Mathematical Sciences, New York University, New York, NY.  
Advisor: Lerrel Pinto

### Bachelor of Technology, Computer Science and Engineering

2013 - 2017

National Institute of Technology - Calicut, KL, India.  
Advisor: Vinod Pathari

## SELECTED PUBLICATIONS & PREPRINTS

Looking beyond the next token

*(In preparation)*

A. Thankaraj, Y. Jiang, Z. Kolter, Y. Bisk

Training a generally curious agent

*(In submission)*

F. Tajwar\*, Y. Jiang\*, A. Thankaraj, S. Rahman, Z. Kolter, J. Schneider, R. Salakhutdinov

That sounds right: Auditory self-supervision for dynamic robot manipulation

*Conference on Robot Learning. PMLR, 2023.*

A. Thankaraj, L. Pinto

Context is Everything: Implicit Identification for Dynamics Adaptation

*IEEE International Conference on Robotics and Automation (ICRA), 2022*

B. Evans, A. Thankaraj, L. Pinto

RB2: Robotic Manipulation Benchmarking with a Twist

*NeurIPS - Datasets and Benchmarks Track, 2021*

S. Dasari, J. Wang, J Hong, S. Bahl, A. Thankaraj, K. Chahal, et al.

## PROFESSIONAL EXPERIENCE

### Carnegie Mellon University

2023 -

Research Assistant : Advised by Yonatan Bisk

- Research focused on multimodal representation learning and decision making

### New York University

2021 - 2022

Research Assistant : Advised by Lerrel Pinto

- Research focused on representation learning and decision making for robotics

### Goldman Sachs

2017 - 2020

Associate/Quantitative Engineer

- Developed analytics solutions for firmwide liquidity requirements.
- Used statistical methods to prototype anomaly detection and time series forecasting models for failing transactions and unencumbered securities.
- Developed and scaled out business critical data pipelines, low latency APIs, stress-testing, monitoring and alerting systems

### Goldman Sachs

2016

Summer Strats Analyst

- Developed tools to visualize inefficiencies in linear optimization engine used to move securities between locations.

## TECHNICAL SKILLS

Programming Languages : Python, C++, Java, shell scripting  
Frameworks : PyTorch, JAX, Triton, CUDA, numpy, scipy  
ML Training tools : Distributed training in PyTorch, DeepSpeed, Ray, Jax TPUs  
Cloud Deployment : GCP, AWS, Azure

## RELEVANT COURSEWORK

Machine learning, Computer Vision, Deep Learning, Natural Language Processing, Probabilistic Graphical Models, Big Data & ML systems, Deep Learning Systems, Multicore Processors, Mathematics for Robotics, Advanced Topics in Reinforcement Learning

## SELECTED AWARDS & HONORS

New York University - Master's Innovation Prize	2022
Google CSRMP Fellow	2022
Distinction, National Institute of Technology, Calicut	2017
National Talent Search Scholarship, Govt. of India	2009 - 2017

## TEACHING EXPERIENCE

PSYCH-UA.46: Lab in Cognition and Perception, New York University	2021
CSCI-GA.2820: DevOps and Agile Methodologies, New York University	2021

## OUTREACH & SERVICE

Reviewer, Conference on Robot Learning (CoRL)	2023
Reviewer, IEEE Robotics & Automation Letters (RA-L)	2023
Mentor, CMU Pathways to AI Research	2023 -
Mentor, NYU AI Winter School	2022 - 2023
Organizer, Katalyst mentorship program for women in STEM	2017 - 2020
Organizer, FOSS Conference - NIT Calicut	2014 - 2017