ABITHA THANKARAJ

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RESEARCH INTERESTS

Representation Learning, Sequential Decision Making, Large Language Models, Multimodal, Robotics

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 Preprint
(In submission)
A. Thankaraj*, Y. Jiang*, Z. Kolter, Y. Bisk

Training a generally curious agent Project
International Conference on Machine Learning (ICML), 2025 **(Spotlight)**
F. Tajwar*, Y. Jiang*, A. Thankaraj, S. Rahman, Z. Kolter, J. Schneider, R. Salakhutdinov

That sounds right: Auditory self-supervision for dynamic robot manipulation Project
Conference on Robot Learning. PMLR, 2023.
A. Thankaraj, L. Pinto

Context is Everything: Implicit Identification for Dynamics Adaptation Project
IEEE International Conference on Robotics and Automation (ICRA), 2022
B. Evans, A. Thankaraj, L. Pinto

RB2: Robotic Manipulation Benchmarking with a Twist Project
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 sequential decision making

New York University **2021 - 2022**
Research Assistant : Advised by Lerrel Pinto
• Research focused on representation learning and sequential 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

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