Thet Htoo Naung

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Education

Massachusetts Institute of Technology Cambridge, MA

Bachelor of Science in Computer Science and Engineering *Expected graduation date: May 2027*

Relevant Courses : Machine Learning, Robotic Manipulation

GPA:4.7

Work Experience

MIT Computer Science and Artificial Laboratory(CSAIL) September 2025-

Undergraduate Researcher *Cambridge, MA*

- Researching simulation-dominant training for robotic manipulation at Improbable AI Lab.
- Building simulation environments and task reset pipelines for AR-based teleoperation data collection.
- Curating and integrating multimodal synthetic datasets with real data, evaluating robustness and sim-to-real transfer.
- Benchmarking policy learning methods such as behavior cloning, diffusion policies, and reinforcement learning (PPO).

Prox Robotics (YC F25) June 2025-September 2025

Machine Learning Engineer Intern *San Francisco, CA*

- Built an end-to-end data processing pipeline to extract task-relevant features from 1000+ robot demonstrations and published structured datasets to Hugging Face.
- Fine-tuned the π_0 VLA model for bolt-nut sorting, achieving 95% success rate in mujoco simulation environment.
- Applied reinforcement learning algorithms (DAC, TD3) on top of imitation-learned policies for manipulation performance improvement.
- Experimented with diffusion-based trajectory augmentation to potentially increase effective dataset size.
- Implemented visual servoing algorithm for robot hand tracking with real-time 30Hz smooth closed-loop control.
- Made open-source contributions to Physical Intelligence and Trossen Robotics for bug fixes and new features.

MIT Brain and Cognitive Sciences Department (BCS) February 2025-May 2025

Undergraduate Researcher *Cambridge,MA*

- Researched speech perception using artificial neural networks modeling a human cochlea in McDermott Lab.
- Designed and generated challenging speech stimuli through audio augmentations to test robustness of ANN speech models using Pytorch and Python.
- Applied signal processing techniques to manipulate speech inputs and study model performance and human alignment using Librosa library.

Decohere AI (YC W23) June 2023 - September 2023

Intern *Seattle, WA*

- Interned at Decohere AI, a Y Combinator-based generative AI start up, contributing web development.
- Redesigned company landing page using Next.jS, significantly improving digital engagement.
- Demonstrated core AI product features at industry conferences.
- Acquired expertise of web-development frameworks such as React and NextJs.

Projects

Firecast: Wildfire Prediction Model September 2024

- Developed a wildfire prediction model at AIM Labs with 97% accuracy using gradient boosting via LightGBM.
- Optimized 8 key features for predicting fire occurrence and size, including soil moisture and vegetation index.
- Processed 592,251 data points (2014–2024) using satellite imagery from NASA MODIS and FIRMS.
- Accessed and processed 400 km^2 of geospatial data via Google Earth Engine API.
- Evaluated ML models, selecting LightGBM after 1,000 training rounds for efficiency.
- Built a web app with Flask backend, Google Maps API, and Next.js frontend providing 365 days of predictions.

Physicks: Physics Motion Simulator October 2023

- Developed an interactive 2D projectile motion physics simulator using Python, Pygame, and Pymunk libaries.
- Implemented OOP for various shapes with customizable properties including position, velocity, mass, and size.
- Designed an intuitive user interface using pygame to add and manipulate objects during the simulation.
- Integrated collision detection, wall construction, and dynamic simulation of objects using Pymunk.
- Won the De Anza Hackathon and received backing from UC Berkeley SCET coordinator.

Skills

Technical: Python, Numpy, Pandas, Pytorch, C/C++, JavaScript, TypeScript, HTML/CSS, React, NextJS, Flask, Mujoco, Git, Jax