

# Peiqi Liu

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## EDUCATION

### New York University

*Bachelors in Honors Computer Science and Mathematics; GPA: 3.96/4.00*

New York, NY

*Sep 2020 – Dec 2023*

## PUBLICATIONS

Peiqi Liu, Yaswanth Orru, Jay Vakil, Chris Paxton, Nur Muhammad Mahi Shafiullah, and Lerrel Pinto. Ok-robot: What really matters in integrating open-knowledge models for robotics, 2024

## AWARDS & ACHIEVEMENTS

**Summa cum laude Honors** GPA falls within the top 5% of the previous year's graduating class.

**Highest honor in Computer Science** GPA greater than 3.65 and Completing an Honors Thesis.

**Dean's Undergraduate Research Grant:** \$1000 Awarded for conducting prominent research projects.

## RESEARCH EXPERIENCE

### NYU CILVR, Grail Lab

New York, NY

*Undergraduate Researcher*

*May 2023 – Now, Research Assistant*

- Worked on robotics, computer vision, and deep learning project “OK Robot” under the supervision of Prof. Lerrel Pinto that invented a modularized zero shot open vocabulary mobile robot manipulation system.
- Used a voxel-based method to distill vision language features of RGBD images into a semantic memory and designed an A\* and SLAM based navigation stack to use semantic memory for open vocabulary navigation.
- Used zero shot grasping model such as AnyGrasp, ContactGraspNet to generate grasps for stretch Robot to pick up objects and filtered grasps by open vocabulary segmentation models such as LangSAM.

### NYU CILVR

New York, NY

*Undergraduate Researcher*

*Jan 2023 – May 2023, Research Assistant*

- Worked on a computer vision and deep learning research project at NYU CILVR Lab with Prof. Mengye Ren that trained a self supervised computer vision model on images from humans' point of view such as SayCam.
- Trained vision representational models by classifying images to video segments they are from and evaluated the models by linear probing on benchmarks such as ImageNet, Toybox.

### NYU CILVR

New York, NY

*Undergraduate Researcher*

*Sep 2022 – Mar 2023, Research Assistant*

- Worked on a image denoising research project that trained neural network to denoise microscopy images.
- Pretrained a supervised image denoising model on large synthesized image denoising dataset and finetuned it with self supervised method such as N2S, Neighbor2Neighbor.

## WORK EXPERIENCE

### NYU CILVR

New York, NY

*Research Assistant*

*April 2022 – Aug 2022, Part-time*

- Worked on a Robotics project Machine Common Sense under supervision of Prof. Rob Fergus where we designed object detection based heuristic policies for agents in Ai2thor simulator to complete different tasks.
- Completed support relations task (predict whether an object at the edge of the table will fall), ramp task (find a ball in a multilevel space), and tool use task (use the tool to poke the ball out from obstacles)

### Yahoo

New York, NY

*Software Development Internship*

*May 2022 – Aug 2022, Full-time*

- Maintained a Yahoo's internal JavaScript dictionary written in TypeScript, Node, Express, React and added new features and fix bugs by writing TypeScript and defining corresponding TypeScript interface.
- Fetched Json data using YQL (Yahoo Query Language) from Vespa database.

## SKILLS

**AI & Robotics:** Python, PyTorch, ROS, ROS2, Machine Learning, Deep Learning, Matplotlib, Numpy, Pandas

**Software Development:** Java, TypeScript, JavaScript, Node, CSS, HTML, React, Linux, Maven, Git, MySQL, C