

# Pranay Reddy Anthireddy

☎ (413) 435-0353 • ✉ pranayr@umass.edu

Github: pranay-ar — Homepage: pranay-ar.github.io — LinkedIn: pranay-ar

## EDUCATION

### University of Massachusetts Amherst

GPA: 3.88/4

○ **Major:** MS, Computer Science

*Expected December 2023*

○ **Relevant Coursework:** Computer Vision, Distributed Operating Systems, Machine Learning, Intelligent Visual Computing, Systems for Data Science.

○ **Responsibilities:** Graduate Teaching Assistant(Grader) for CS370 - Introduction to Computer Vision

### Indian Institute of Information Technology, Design and Manufacturing, Jabalpur

GPA: 3.34/4

○ **Major:** B.Tech, Electronics and Communication Engineering

*July 2022*

○ **Relevant Coursework:** Probability & Random Processes, Image Processing, Digital Watermarking, Signals & Systems, Fundamentals of Robotics, Computer Networks, Data Structures and Algorithms.

## WORK AND RESEARCH EXPERIENCE

### Meta (formerly Facebook)

*Graduate Student Researcher*

*Feb '23 - Current*

- Working with **Dr. Shane Moon & Aparajita Saraf** on enhancing IMU alignment with CLIP embedding space.
- Built an IMU summariser that projects the sensor data to the CLIP space and generates a summary of the video activity and answers questions based on the activity.

### Carnegie Mellon University

*Research Intern - Computer Vision*

*Sep '21 - Nov '22*

- Worked with **Dr. Chen Wang** and **Prof. Sebastian Scherer** at Airlab in Robotics Institute on Few Shot Object Detection and a physics based DL optimization library called PyPose (work has been **accepted at CVPR 2023**).
- Proposed a brand new few-shot object detection model free of fine-tuning and improved baseline by up to 60% (even higher than carefully fine-tuned models). Work has been **accepted at ECCV 2022**.

### Indian School of Business, Hyderabad

*Research Intern - Computer Vision*

*May '21 - Aug '22*

- Worked with **Dr. Sumeet Kumar** in finding product placements of various brands on YouTube-Kids videos.
- Generated three new datasets, established optimal accuracies using Supervised Contrastive Learning for the product identification task and created the pipeline for end-to-end ad recognition.

## RESEARCH

[1] Wang, C., Gao, D., Xu, K., ...**Pranay Reddy**..., Scherer, S., **PyPose: A Library for Robot Learning with Physics-based Optimization.**, (CVPR 2023, Accepted) [\[Link\]](#)

[2] Bowen Li, Chen Wang, **Pranay Reddy**, Seungchan Kim, Sebastian Scherer, "**AirDet: Few-Shot Detection without Fine-tuning for Autonomous Exploration**," (ECCV 2022, Accepted) [\[Link\]](#)

## SKILLS

- **Frameworks and Libraries:** PyTorch, TensorFlow, OpenCV, Flask, Keras
- **Tools and Languages:** Python, C/C++, MATLAB, Git, Docker, GCP, AWS

## ACHIEVEMENTS

- **Winner:** Seldonian ML Toolkit Competition

[\[Link\]](#)

## PROJECTS

○ **PyPose:** An open-source library that connects classical robotics methods with modern learning based approaches. Contributed towards Adj, euler2SO3 functions. [\[Link\]](#)

○ **Catheter Positioning Tool:** A positioning tool created using Semantic Segmentation to identify the nerve structure in Ultrasound Images based on U-Net architecture with a dice coefficient of 75%. [\[Link\]](#)

Multiple projects on Recommendation Systems, Fairness Detection, etc on my GitHub

[\[Link\]](#)

## VOLUNTEERING

- **Reviewer:** IEEE Robotics and Automation Letters (RA-L).