

Pranay Reddy Anthireddy

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EDUCATION

University of Massachusetts Amherst

Ongoing

- **Major:** MS, Computer Science

Expected Spring 2024

- **Relevant Coursework:** Computer Vision, Distributed and Operating Systems, Machine Learning.

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.

WORK AND RESEARCH EXPERIENCE

Carnegie Mellon University

Research Intern - Computer Vision

Sep '21 - Current

- Working with **Dr. Chen Wang** and **Prof. Sebastian Scherer** at Airlab in Robotics Institute on Object Oriented Scene Recognition using Graph Neural Networks.
- Previously, 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 baseline and optimal accuracies for the product identification task and created the pipeline for end-to-end ad recognition.

PUBLICATIONS

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

TECHNICAL SKILLS

- **Frameworks and Libraries:** PyTorch, Tensorflow, OpenCV, Flask, Keras
- **Tools and Languages:** Python, C/C++, MATLAB, Git, Docker
- **Academic Interests:** Computer Vision, Deep Learning, Machine Learning

PROJECTS

Catheter Positioning Tool

[Link]

Technologies: Keras, Tensorflow

- 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%.

GROUN - Get Rid of Your Notes

[Link]

Technologies: Keras, Tensorflow, Javascript

- Built a tool to delete lectures notes automatically using image-classification on a self prepared data set of over 12000 images by using image scraping techniques thereby achieving a validation accuracy of 95%.

Digital Grading of Fruits

[Link]

Technologies: PyTorch

- Built a grader by extracting custom features using Image Processing techniques and trained them on Random Forest and various ML algorithms thereby achieving a validation accuracy of 99%.

SERVICE

- **Reviewer:** IEEE Robotics and Automation Letters (RA-L).
- **Project Assistant:** MAWE - An NGO focussed on empowering women entrepreneurs in India.
- **Coordinator:** Led the Literary and Quizzing Society at IIITDM Jabalpur.