

# Sairam VCR

Ph.D. Student, Indian Institute of Technology Hyderabad, India.

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## Research Interests

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Computer Vision, Deep Learning, Efficient & Deployable AI, Tiny & Oriented Object Detection.

## Education

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Indian Institute of Technology (IIT), Hyderabad PhD in Artificial Intelligence Advisor: Dr. Vineeth N Balasubramanian Collaboration: <b>DRDO</b> - Young Scientist Laboratory	8.52 / 10 <i>Aug 2020 - present</i>
Indian Institute of Information Technology (IIIT), Tiruchirappalli B. Tech. in Computer Science and Engineering <b>Gold medal for Academic Excellence</b>	9.17 / 10 <i>2016</i>
Sri Chaitanya Junior College Intermediate , Class 12	98.0 % <i>2013</i>
Triveni Talent School SSC, Class 10 <b>Gold medal - State first in English</b>	10 / 10 <i>2012</i>

## Publications

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### 2024:

3. Rebbapragada V C Sairam, Pranoy Panda, Vineeth N Balasubramanian, C2FDrone: Coarse-to-Fine Drone-to-Drone Detection using Vision Transformer Networks, *IEEE International Conference on Robotics and Automation, ICRA 2024* [paper].

### 2023:

2. Rebbapragada V C Sairam, Monish Keswani, Uttaran Sinha, Nishit Shah, Vineeth N Balasubramanian, ARUBA: An Architecture-Agnostic Balanced Loss for Aerial Object Detection, *IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2023* [paper].
1. Charchit Sharma, Ayan Kumar Pahari, Pranoy Panda, Rebbapragada V C Sairam, Deepak Vijaykeerthy, Vineeth N Balasubramanian, Do Models see Corruption as we see? An Item Response Theory based study in Computer Vision, *ICLR Workshop on Practical Machine Learning for Developing Countries: learning under limited/low resource scenarios, ICLR 2023*.

## Awards and Achievements

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- Delivered an oral presentation at ICRA 2024
- Received a Research Excellence Award at the 16th Foundation Day of IIT Hyderabad
- Honored with a Gold medal for academic excellence in Computer Science at IIIT Tiruchirappalli

## Services

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- Reviewer for Pattern Recognition 2024, ACM Computing Surveys
- Subreviewer for TIP 2024, ICRA 2024, WACV 2024, Neurips 2023, ICCV 2023, IJCAI 2023
- Student volunteer (hands-on session) at IIIT Hyderabad Summer School on AI 2024
- Student Volunteer for ACML 2022

## Research Forums Attended

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- Conferences: ICRA 2024, ACML 2022
- Amazon Research days 2024, Symposium on Data for Public Good 2024, IIIT Hyderabad's 8th Summer School on AI 2024, Google Research Week 2024 and 2023.

## Teaching Assistant

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- Deep Learning (Spring 2024)
- Sequence Models (Spring 2023)
- Deep Learning (Spring 2023)
- Reinforcement Learning (Summer 2022)
- Foundations of Machine Learning (Fall 2021)
- Intro to Modern AI (Fall 2020)

## Skills

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- Libraries and Tools: PyTorch, Numpy, Scipy, scikit-learn, OpenCV, Pandas
- Miscellaneous: Docker, Git, Digital system design, 8086 & 8085 Microprocessor

## Relevant Courses

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- AI5000 - Foundations of Machine Learning
- AI5100 - Deep Learning
- CS5803 - Natural Language Processing
- AI5002 - Probability and Random Variables
- AI5006, AI5106 - Linear Algebra

### Coursera Courses:

- Introduction to Artificial Intelligence
- Python for Data Science, AI & Development
- Neural Networks and Deep Learning
- Getting started with AI using IBM Watson
- Building AI powered chatbots

## Work Experience / Projects

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### Identification of Indian Sign Language using Transfer Learning (Apr – Jun 2020)

- Implemented a CNN model using Tensorflow, OpenCV, and transfer learning techniques
- Designed an interactive web interface that utilizes a laptop camera for real-time sign language detection
- Successfully integrated the model and interface to create a fully functional sign language detection system

### Full Stack Developer - Aranya Organics & Generals, Hyderabad (Mar – May 2019)

- Designed a dynamic and interactive website for a start up manufacturing organic beauty products
- Integrated the website with Flipkart and increased their sales by 52%

## Extra Curricular Activities

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- Member of IITH ACM Chapter
- Gold medal in Carrom sigles, Prothymos'19 (IIIT-T Sports fest)
- First prize in district-level GK competitions
- Bronze medal in Theatre drama - Balotsav'13 (state-level talent competition)

## Leadership

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- As the Vice-President of IIIT-T from June 2019 to July 2020, I played an active role in formulating strategic plans for multiple academic and extracurricular events, significantly contributing to their success.
- As Secretary of IIIT-T from June 2018 to May 2019, I maintained clear communication channels between students and administration, ensuring efficient coordination.
- Serving as Secretary for Aahladh'19, IIIT-T's cultural festival, I developed coordination and collaboration skills by working closely with students, faculty, deans, and the director.

## References

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- Vineeth N Balasubramanian, Professor in CSE, IIT Hyderabad, India. E-mail: vineethnb@iith.ac.in