

# Chaitanya Devaguptapu

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## Education

### Indian Institute of Technology, Hyderabad

Aug 2019 - Jul 2022

*Masters by Research (M.Tech-RA) in Computer Science ([Thesis Link](#))*

GPA: 9.7/10

- *Advisor:* Dr. Vineeth N Balasubramanian
- *Awards:* Shastri Research Fellowship, Appreciation in Research by Department of CSE

### Jawaharlal Nehru Technological University, Hyderabad

Aug 2014 - May 2018

*B.Tech in Electronics and Communication*

## Experience

### Fujitsu Research India

July 2022 - Present

*Senior Researcher*

Initiated and lead a new research team at Fujitsu Research India focused on Generative AI, delivering multiple publications at premier conferences (NAACL'25, WACV'25, ACL'24)

Worked on a diverse set of problems, including 3D scene editing (WACV'24 Oral, top 6%), Multi-modal learning, and self-supervised vision transformers.

### PAIR lab, University of Toronto

Jan 2021 - July 2022

*Visiting Graduate Researcher*

*Advisor:* Dr.Animesh Garg

Worked on problems related to data-efficient transfer learning and finegrained video understanding

### Indian Institute of Technology (IIT), Hyderabad

June 2018 - July 2022

*Research Assistant*

*Advisor:* Dr.Vineeth N Balasubramanian

Conducted Research on borrowing features from data-rich domains to improve object detection in domains with less annotated data. Parallely, I worked on object detection in low-resolution Thermal Images. The research was supported by DRDO, Government of India.

## Papers and Patents

- [1] Ankush Agarwal, Ganesh S, **Chaitanya Devaguptapu**, Hybrid Graphs for Table-and-Text based Question Answering using LLMs, In Proceedings of the 2025 Conference of the North American Chapter of the Association for Computational Linguistics(**NAACL 2025 - Main Track**)
- [2] Vivek Vardhan, Shivangana Rawat, **Chaitanya Devaguptapu**, Charu Sharma, Manohar Kaul, Towards a Training Free Approach for 3D Scene Editing, In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV 2025**)
- [3] Pranoy Panda, Ankush Agarwal, **Chaitanya Devaguptapu**, Manohar Kaul, Prathosh AP, HOLMES: Hyper-Relational Knowledge Graphs for Multi-hop Question Answering using LLMs, In Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (**ACL 2024 - Main Track**)

- [4] **Chaitanya Devaguptapu\***, Siddharth Katageri\*, Arkadipta De\*, Prasad Kasu, Charu Sharma, Manohar Kaul Synergizing Contrastive Learning and Optimal Transport for 3D Point Cloud Domain Adaptation, In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV 2024**) ([Oral – Top 7% of accepted papers](#))
- [5] Shivangana Rawat, **Chaitanya Devaguptapu**, V. Balasubramanian, Partial Label Learning meets Active Learning: Enhancing Annotation Efficiency through Binary Questioning, International Conference on Machine Learning Workshops, **ICML-W 2023**.
- [6] **Chaitanya Devaguptapu**, Devansh Agarwal, Gaurav Mittal, Pulkit Gopalani, V. Balasubramanian; Balasubramanian, On Adversarial Robustness: A Neural Architecture Search Perspective, Workshop on Adversarial Robustness in the Real World, **ICCV-21**, also accepted at **ICLR-21** workshops (as a [Contributed Talk and Spotlight](#))
- [7] **Chaitanya Devaguptapu\*** Akshay Chandra L\*, Sai Vikas Desai\*, , V. Balasubramanian. "On Initial Pools for Deep Active Learning", Preregistration Workshop at **NeurIPS 2020** (PMLR Volume 148)
- [8] **Chaitanya Devaguptapu**, Ninad Akolekar, Manuj Sharma, V. Balasubramanian., A Methodology for Transfer of Knowledge from Data-Rich Domains for Thermal Image Processing, **Indian Patent** Application No. 202011032663 (filed in Aug 2020)
- [9] **Chaitanya Devaguptapu**, Ninad Akolekar, Manuj Sharma, V. Balasubramanian. "Borrow from Anywhere: Pseudo Multi-modal Object Detection in Thermal Imagery," Workshop on Perception Beyond the Visible Spectrum, **CVPR 2019** ([Spotlight](#))

## Pre-prints

- [1] Pranoy Panda, Raghav Magazine, **Chaitanya Devaguptapu**, Vishal Sharma, Adaptive LLM Routing under Budget Constraints
- [2] Shivam Chandhok, Krishna Murthy Jatavallabhula, **Chaitanya Devaguptapu**, Qiao Gu, Deepti Balachandra Hegde, George Tang, Connie Jiang, Sarah Schwettmann, Joshua B. Tenenbaum, Vibhav Vineet, Ondrej Miksik, Vineeth N. Balasubramanian, Leonid Sigal, Antonio Torralba, ***Neurosymbolic Language Models for 3D Understanding***
- [3] **Chaitanya Devaguptapu**, Sumukh Aithal, Yamada Moyuru, Manohar Kaul, Semantic Graph Consistency: Going Beyond Patches for Regularizing Self-Supervised Vision Transformers
- [4] **Chaitanya Devaguptapu**, Samarth Sinha, Joseph K J, V. Balasubramanian, Animesh Garg,  $\Delta$ -Networks for Efficient Model Patching

## Industry/Other Experience

### UpGrad

June-2020 - Jan 2023

*Small Group Coach*

*Remote*

As a Small Group Coach, I hold a 1.5 hour session every 15 days to clear the doubts of students pursuing upGrad's PG Diploma in Machine Learning, Data Science.

### Udacity

Jan 2017 - Dec 2020

*Student Mentor*

*Remote*

I guide nanodegree students and review, debug, asses code files of projects submitted as a part of Deep Learning and AI Nanodegree's

**SmatSocial***Machine Learning Intern*

Dec 2016 - Feb 2017

*Hyderabad, India*

Worked on building a system for automated emotion recognition from speech. The project was more applied in nature, we made use of several open-source NLP and Speech Processing libraries.

**InfiBooks***Data Analyst Intern*

Oct 2016 - Dec 2017

*Hyderabad, India*

Built an end-to-end data cleaning pipeline; Analysed purchase patterns of users and suggested methods to increase the sales; Automated the process of data collection.

**Service and Achievements**

**Awards:** Shastri Research Student Fellowship - 2020 (one among the 8 students selected from India), Appreciation in Research Award by Department of CSE, IIT-Hyderabad

**Reviewer:** NeurIPS-2022, ICLR-2022, ECCV-2022, IEEE Pattern Recognition Journal, MFI-2020, WACV-2022, NeurIPS-2023, WACV-2024, AAAI-2024

**Sub-Reviewer:** NeurIPS-2023, WACV-2023, CVPR-2019, ECML-PKDD-2019, ICCV-2019, AAAI-2020, ICLR-2020, BMVC-2020, NeurIPS-2020

Started an ACM student chapter at IIT-Hyderabad with my peers; Serving as a Vice chair for this chapter (Oct 2020 - June 2021). Organized various research talks and events to promote student-driven research culture at IIT-Hyderabad

Served as a System-Admin for NVIDIA DGX system at IIT-Hyderabad

**Relevant Coursework, Certifications**

**IIT-H:** CS5370 Deep Learning for Vision, CS6440 Special Topics in Machine Learning, CS5500 Reinforcement Learning

**Online:** *Udacity Nanodegree's:* Deep Learning (March, 2018); Machine Learning (August 2016); *Coursera:* Machine Learning Specialisation by University of Washington.