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 (8 students nationally), Appreciation in Research by Dept. of CSE

Jawaharlal Nehru Technological University, Hyderabad Aug 2014 - May 2018
B.Tech in Electronics and Communication

Research Experience

Fujitsu Research India July 2022 - Present
Lead Researcher (2024-Present) ← Senior Researcher (2023-2024) ← Researcher (2022-2023)

Initiated and led a small research team focused on Generative AI and LLM-based agents research, delivering 8 publications at premier conferences (NAACL'25, WACV'25, ACL'24, ACL'25, EMNLP'25)

Worked on a diverse set of problems, including 3D scene editing (WACV'24 Oral, top 7%), Multi-modal learning, LLM based applications and representation learning.

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. Parallelly, I worked on object detection in low-resolution Thermal Images. The research was supported by DRDO, Government of India.

Papers and Patents

[1] Harsh Vishwakarma, Ankush Agarwal, Ojas Patil, **Chaitanya Devaguptapu**, Mahesh Chandran, Can LLMs Help You at Work? A Sandbox for Evaluating LLM Agents in Enterprise Environments, In Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2025 - Main Track**)

[2] Pranoy Panda, Raghav Magazine, **Chaitanya Devaguptapu**, Sho Takemori, Vishal Sharma, Adaptive LLM Routing under Budget Constraints, In Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2025 - Findings Track**)

[3] Pranav Bhagat, K N Ajay Shastry, Pranoy Panda, **Chaitanya Devaguptapu**, Evaluating Compound AI Systems through Behaviors, Not Benchmarks, In Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2025 - Findings Track**)

[4] Parth Thakkar, Ankush Agarwal, Prasad Kasu, Pulkit Bansal, **Chaitanya Devaguptapu**, Finding Needles in Images: Can Multi-modal LLMs Locate Fine Details?, In Proceedings of the 63rd Annual Meeting of the Association for Computational Linguistics (**ACL 2025 - Main Track**) (SAC Highlights Award Recipient – Top 1% of accepted papers)

[5] 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**)

[6] 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**)

[7] 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**)

[8] **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)

[9] 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.

[10] **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)

[11] **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)

[12] **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 (under review)

[1] 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***

[2] **Chaitanya Devaguptapu**, Sumukh Aithal, Yamada Moyuru, Manohar Kaul, Semantic Graph Consistency: Going Beyond Patches for Regularizing Self-Supervised Vision Transformers

[3] **Chaitanya Devaguptapu**, Samarth Sinha, Joseph K J, V. Balasubramanian, Animesh Garg, Δ-Networks for Efficient Model Patching

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, assess code files of projects submitted as a part of Deep Learning and AI Nanodegree's

SmatSocial Dec 2016 - Feb 2017
Machine Learning Intern *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 Oct 2016 - Dec 2017
Data Analyst Intern *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: Best Employee of the year - 2024, Fujitsu Research India Grand Award - 2024 (for our work on Knowledge Graphs), 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, ARR (ACL, EMNLP-2025), NeurIPS-2025

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.