Chaitanya Devaguptapu

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https://tdchaitanya.github.io
Github: tdchaitanya

Education

Indian Institute of Technology, Hyderabad Aug 2019 - Present
M.Tech in Computer Science *9.0/10*

Advisor: Vineeth N Balasubramanian

Keshav Memorial Institute of Technology, Hyderabad Aug 2014 - May 2018
B.Tech in Electronics and Communication

Research Experience

PAIR lab, University of Toronto Jan 2021 - Present
Visiting Graduate Researcher

Advisor: Dr.Animesh Garg

Conducting research on learning task and dataset specific inductive biases.

Indian Institute of Technology (IIT), Hyderabad June 2018 - Present
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 detection in low resolution Thermal Images. The research was supported by DRDO, Government of India.

Publications

[1] **Chaitanya Devaguptapu**, Devansh Agarwal, Gaurav Mittal, V. Balasubramanian, On Adversarial Robustness: A Neural Architecture Search Perspective, Workshops on Neural Architecture Search (Spotlight), S2D-OLAD, Robust and Reliable ML in real-worls and Responsible AI (Oral) and at International Conference on Learning Representations (ICLR'21), May 2021

[2] Akshay Chandra L*, Sai Vikas Desai*, **Chaitanya Devaguptapu***, V. Balasubramanian. "Is There a Good Initial Pool for Active Learning?" Pre-Register Workshop, (NeurIPS-20)

[3] **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)

[4] **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)

Industry/Other Experience

Upgrad Remote
Small Group Coach *Jun 2020 - Present*

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 Remote
Student Mentor *Jan 2017 - Dec 2020*

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

SmatSocial Hyderabad, India
Machine Learning Intern *Dec 2016 - Feb 2017*

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 Hyderabad, India
Data Analyst Intern *Oct 2016 - Dec 2017*

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

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

Reviewer: MFI-2020

Started an ACM student chapter at IIT-Hyderabad with my peers; Serving as a Vice chair for this chapter (Oct 2020 - Present)

Serving 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.

Projects (Application focused)

- **Object Detection in Low-Resolution Thermal Imagery** - Enhanced the performance of object detection in thermal images by increasing the resolution of 160 x 120 images using super-resolution.
- **Detecting Fake Reviews** - Built a system to predict whether a hotel review is real or deceptive, the proposed approach uses some standard NLP and Machine Learning algorithms.
- **Customer Segmentation** - Reviewed unstructured data to understand the patterns and natural categories that the data fits into, used multiple algorithms, compared, and contrasted their results, made predictions about the natural categories of multiple types in a dataset, then checked these predictions against the result of the unsupervised analysis.
- **Student Intervention System** : Investigated the factors that affect a student's performance in high school. Trained and tested several supervised machine learning models on a given dataset to predict how likely a student is to pass. Selected the best model based on relative accuracy and efficiency.