Venkata Bhanu Teja **Pallakonda**

Master's Computer Science · Deep Learning

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Education

Texas A&M University — *College Station, TX*
Master of Science, Computer Science — *Aug. 2021 - Present*

Indian Institute of Technology(IIT) — *Tirupati, India*
Bachelor of Technology, Electrical Engineering - CGPA: 8.68/10 — *Aug. 2015 - May. 2019*

Skills

Programming Python, JS, Mysql, MongoDB, LaTeX
Frameworks Tensorflow, Pytorch, Rasa, DialogFlow, FastAPI, Flask, ReactJS, Docker

Relevant Specialization

Deep Learning, Pattern Recognition and Machine Learning, Analog Circuits, Computer Vision, Complex Variables, Artificial Intelligence, Calculus, Image and Video Processing, Linear Algebra, Digital Systems, Optimization Techniques

Work Experience

Teaching Assistant AI-4-ALL — *College Station, TX, US*
Teaching Assistant for AI4ALL Organization at TAMU — *Sep. 2021 - Present*

- Holding weekly office hours to support under grad students with hands-on assignments and projects in AI.

Legato Health Technologies (Anthem Inc.) — *Hyderabad, India*
Associate ML/AI Research and Development — *Oct. 2020 - Jul. 2021*

- Implemented minutes of meeting generation from video recordings of a meeting
- Built and deployed overall service infrastructure utilizing Docker container and flask on AWS EC2 instance
- Developed the pipeline using pre-trained models like jasper, GPT2 and used BERT language models on custom made data-sets for intent classification to finally generate minutes of meeting.

Fincare Small Finance Bank — *Banglore, India*
Machine Learning Engineer — *Jun. 2019 - Oct. 2020*

- Developed Whatsapp banking chat-bot using hugging-face transformer models for intent classification and entities extraction for all the banking related queries.
- Designed model for Indian ID card detection, field extractor and masker for fields like Name, address, contact number and other relevant information and built RESTful APIs using FASTapi and python.

Publications & Projects

MixRnet — *College Station, Texas*
Using mixup as regularization and tuning hyper-parameters for ResNets — *Sep. 2021 - Nov. 2021*

- Using mixup data augmentation technique as regularization and improving the ResNet50 architecture performance on image classification tasks. **Link to arXiv**
- Achieved an error of **5.43%** on CIFAR-10 data-set (Top 120 on CIFAR-10 bench-marking). **Link to github**.

Building and Visualizing Machine Language Translation — *Hyderabad, India*
TowardsAI - Medium — *Aug. 2020 - Aug. 2020*

- Article on Building and visualizing Machine Language Translation using attention models on medium and published with TowardsAI. **Link to article**

Undergraduate Research, Semantic Segmentation

Tirupati, India

B.Tech Thesis, Mentor : Dr. Rama Krishna Gorthi

Sep. 2018 - Jun. 2019

- Applied seg-net, refine-net architecture on aerial images to segment out images into classes of buildingsroads and neither of buildings or roads
- Trained models on mitade20k data-set and fine-tuned models by class imbalance methods and Yolo-object detection method to remove false-positive intersections, which is very useful in autonomous driving, automated parking allotment system.
- Designed pipeline using Yolo algorithm to detect the boxed objects first and later on got class imbalance quotient's from the training data-sets and used those on the box by box segmented results to reduce false-positive intersections on the overall image. **Link to thesis**

Dense-Crowd Counting in an image - Crowd-Net

Tirupati, India

Instructor: Dr. Rama Krishna Gorthi , Dr. Subrahmanyam Gorthi

Sep. 2017 - Dec. 2017

- Implemented architecture that counts the total crowd in the dense crowd images using deep and shallow convolutional neural networks.
- Deep CNN helped to count near the part of the image where the density of the crowd is very high and shallow CNN helped in detecting the persons who are completely visible (where the complete body was visible).
- This method could detect up to 80% accuracy where the actual count in the image is approximately as high as 4000

Mailhunt

Hyderabad, India

https://mailhunt.io

Jul. 2021 - Aug. 2021

- Developed Full stack application to check if email address exists and also to check if an email is actually deliverable to the given email in real time.
- Restful APIs are developed using FASTapi and other python libraries and Frontend is developed using React JS and integrated with stripe
- Deployed overall service infrastructure utilizing Docker container, VercelCI, and several AWS stack(Including EC2, ECS, S3, CloudFront, RDS, IAM), focusing on high-availability, and auto-scaling.

Self Learning Chatbot

Hyderabad, India

Freelancing

May. 2021 - Aug. 2021

- Developed a generic chatbot app system which automatically creates question answer pairs from a document or URL and responds to user queries based on the context in the URL/Document.
- Pretrained hugging face transformer models are used for question and answer pair generation.
- Rasa chatbot framework is used to build the end to end chatbot model using above generated QA pairs.

Achievements and Leadership

- $20,000 Worth Merit based complete fee waiver from 8th to 12th grade.
- Shortlisted for international and national level examinations: Junior Science Olympiad, Junior Astronomy Olympiad, National Talent Search Examination, Kishore Vaigyanik Protsahan Yojana.
- Electrical Engineering Placements & Internships coordinator at IIT Tirupati.
- Lead and only developer of personal project mailhunt and whatsapp banking chatbot at Fincare.
- Represented IIT Tirupati's Cricket team as Vice-Captain in Inter IIT Sports Meet 2017

Work Authorization

- Eligible to work in US for 36 months under Optional Practical Training (OPT) and 12 months under Curricular Practical Training (CPT).