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Venkata **Bhanu** Teja Pallakonda

Homepage

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EDUCATION

Master of Science in Computer Science, *Texas A&M University, College Station - GPA: 4/4* — Aug 2021 - Present
Bachelor of Technology in Electrical Engineering, *Indian Institute of Technology (IIT) Tirupati - GPA: 8.68/10* — Aug 2015 - May 2019

SKILLS & RELEVANT SPECIALIZATION

Programmming	Python [Pytorch, TensorFlow, OpenCV, Sklearn, Rasa, FastAPI], Javascript, Reactjs, SQL, Docker.
Specializations	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

Research Assistant, Dr. Ricardo Gutierrez-Osuna — **Jan. 2022 - Present**
Texas A&M University — *College Station, Texas*
- Predicting pancreatic cancer using protein values by reducing the features and improving recall using ML techniques.
- Working on voice conversion and accent conversion deep learning methods.

Machine Learning Engineer — **Oct. 2020 - Jul. 2021**
Legato Health Technologies (Anthem Inc.) — *Hyderabad, India*
- Implemented minutes of meeting generation from video recordings of a meeting. Developed the pipeline using pre-trained models jasper, GPT2 and used BERT language models on custom made datasets.

Machine Learning Engineer — **Jun. 2019 - Oct. 2020**
Fincare Small Finance Bank — *Banglore, India*
- Developed Whatsapp banking chat-bot using hugging-face transformer models for intent classification and entities extraction.
- Designed models for ID card detection, field extractor and masker for fields.

PROJECTS

Any to Any voice conversion using transformers — **Feb. 2022 - Present**
Texas A&M University — *College Station, Texas*
- Separated linguistic features and voice identity of an utterance and used these two features independently to achieve any combination on conversion. BNF and Speaker embeddings are inputs and mel-spectrogram is predicted.
- Trained on transformer with CNN pre-nets and post-nets. Speech quality syntesised is very clear with good voice conversion.

MixRnet (Link to arXiv) — **Sep. 2021 - Nov. 2021**
Texas A&M University — *College Station, Texas*
- Mixup data augmentation technique as regularization and improving the ResNet50 architecture accuracy on image classification.
- Achieved an error of **4.87%** on CIFAR-10 data-set (Top 105 on CIFAR-10 bench-marking). **Link to github**

Image colorization (Grayscale to RGB) Link to github — **Jan 2022 — Feb 2022**
Texas A&M University — *College Station, Texas*
- Image is converted to lab space(2 channel) to reduce the regression by a channel. Model is trained on UNET architecture.
- Tried with various loss functions (MSE, SSIM, TVLOSS, Pretrained VGG feature loss). Weighted loss gave better performance.

Undergraduate Research Thesis, Semantic Segmentation Link to thesis — **Sep. 2018 - Jun. 2019**
IIT Tirupati — *Tirupati, India*
- Trained models on mitade20k dataset and finetuned 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.

Self Learning Chatbot — **May. 2021 - Aug. 2021**
Freelancing — *Hyderabad, India*
- Using RASA framework 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.

OTHERS

$20,000 Worth Merit based complete tuition waiver from 8th to 12th grade.
Represented IIT Tirupati's Cricket team as Vice-Captain in Inter IIT Sports Meet 2017
Eligible to work in US for - 36 months Optional Practical Training (OPT) and 12 months under Curricular Practical Training (CPT).