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Venkata **Bhanu** Teja Pallakonda

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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 Processing, Linear Algebra, Optimization Techniques
Soft Skills Strategy, Planning, Flexibility, Time Management, Analytical Thinking, Ability to work independently

Work Experience

Machine Learning Internship — **May 2022 - Aug 2022 & Jan 2023 - Present**
Productiv — *Seattle, Washington*

- Built a pipeline to automatically parse key fields from customer contracts. The pipeline had **(a)** A document type classifier to filter to relevant documents **(b)** A finetuned LayourLMv3 model on business relevant data **(c)** A Labelstudio based annotation pipeline for training data and measuring success

Research Assistant (NSF Funded), Teaching Assistant — **Jan. 2022 - Dec 2022**
Texas A&M University — *College Station, Texas*

- Predicting pancreatic cancer using protein values by reducing the features and improving recall using ML techniques.
- Working as Teaching assistant for CSCE431 (SWE) class to assist professor and teach student SWE industry practices during lab.

Machine Learning Engineer — **Oct. 2020 - Jul. 2021**
Legato Health Technologies (Anthem Inc.) — *Hyderabad, India*

- Built a tool to generate meeting minutes from video recordings of a meeting. Developed the pipeline using pre-trained models—jasper, GPT-2, and BERT—on custom datasets.

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

- Developed a Whatsapp banking chat-bot using Hugging Face transformer models for intent classification and entity extraction.
- Created models for ID card detection, field extraction, and and field masking (for privacy).

Projects

Any to Any voice conversion using transformers Link to presentation — **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 synthesized is very clear with good voice conversion.

repaper - Python package Link to Github — **Oct. 2022 - Nov. 2022**
Open-source contribution

- A python package to create an editable PDF form or online forms from a sample form image. Used **LayoutLM** model trained on a Question-Answer dataset to identify key-value pairs and **easy-ocr** to extract the bounding boxes and text information.

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**
Open-source contribution — *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.

Eligible towork in the US for - 36 months Optional Practical Training and 12 months under Curricular Practical Training.