Parsa Revanth

M.Tech - Artificial Intelligence
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Summary

I'm an M.Tech 2nd-year student doing my master's thesis project under Dr. Anand Mishra at IIT Jodhpur. I'm a deep learning enthusiast interested in solving problems that fall under the umbrella of computer vision and natural language processing.

Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech - AI	Indian Institute of Technology, Jodhpur	7.44/10	2020 - Present
B.Tech - ECE	Indian Institute of Technology, Guwahati	6.92/10	2019
Senior Secondary	Board of Intermediate Education, T.S	97.2%	2015
Secondary	Board of Secondary Education, A.P	9.3/10	2013

Projects

- **Abstractive Text Summarization** *April'21-May'21*
  The objective is to summarize the document within 20 words. We implemented this task by finetuning the existing benchmark model PEGASUS. PEGASUS is a sequence to sequence model using transformers as the encoder and decoder.
- **Custom NER system design using LSTM** *April'21-May'21*
  The objective is to identify and predict the named entity in the text corpus. We have generated the NER annotated corpus using spacy to train the LSTM based model. We have built an LSTM based model to predict the named entities in the text documents.
- **Sentiment Analysis** *April'21-May'21*
  The objective is to predict the sentiment of the text. We used the IMDB dataset to predict the sentiments of the reviews. We used various models like Bi-LSTM, BERT, and other classical ML techniques like Decision trees, Naive Bayes, and Logistic regression.
- **Singer Identification from songs** *Jan'21-Feb'21*
  Prof. Mayank Vatsa, Professor, CSE Department, IIT Jodhpur.
  The aim of this project is to predict the singer based on his audio sample. For performing audio classification, the ImageNet-Pretrained standard deep CNN model is used for feature extraction, and XG- Boost is used as the final classifier.
- **Implemented Basic Machine Learning algorithms** *Sep'20-Oct'20*
  The algorithms implemented are SVM (support vector machine) classifier, a handwritten digit classifier using a neural network. The algorithms implemented from scratch are logistic regression using SGD (stochastic gradient descent), PCA (principal component analysis), and K-means clustering.
- **IoT Energy Modeling** *Bachelor Thesis Project*
  Dr. Sonali Chouhan, Associate Professor, EEE Department, IIT Guwahati.
  A Network Model which contains devices is designed. The model outputs the optimized energy consumption of the devices. Every device consumes different amounts of energy as a whole and this is because every device uses different protocols to access within the network.
- **Single Camera-based Object Tracking** *March'19-April'19*
  Dr. M. K. Bhuyan, Professor, EEE Department, IIT Guwahati.
  An algorithm is designed to track the object in the video. We used the particle filter technique for tracking the object. We used the HSV color model to compute the histogram.
- **Rangoli laying Robot** *Jan'18-April'18*
  Dr. Harshal B. Nemade, Professor, EEE Department, IIT Guwahati.
  A Robot is designed which can draw the outlines of the figures. An algorithm in Python is developed in order to convert the Gerber format to the scale which is limited by hardware. Serial communication is used to transfer the data from a laptop to Arduino.

- **Gender Classification from Speech** *Oct '17-Nov '17*

  Dr. Prithwijit Guha, Assistant Professor, EEE Department, IIT Guwahati.

  An algorithm is designed to classify the gender from the speech. The speech is pre-processed by windowing and later MFCC's are generated and thereby generating the feature Vectors. We used the K means clustering algorithm to find the mean of the feature vectors. By using the feature vectors we predict the gender.

Technical skills

- **Programming languages:** C, C++, Python
- **Libraries/Frameworks:** Pytorch, Keras*, Numpy, Pandas
- **Web technologies :** HTML
- **Embedded Boards:** Arduino
- **Miscellaneous:** MATLAB*

  ** Elementary proficiency*

Key courses are taken

- Artificial Intelligence
- Computer Vision
- Speech Technology
- Digital Image Processing
- Data Structures and Practices
- Natural language Processing
- Pattern Recognition and Machine Learning
- Deep Learning
- Digital Signal Processing

Teaching Activities

- **Introduction to Python Programming,** IIT Jodhpur *Dec'20-May'21*

Positions of Responsibility

- Executive member of SAIL'17(Student Alumni Internal Linkage).
- Member of PR and Branding Team in Techniche'15.

Achievements

- Awarded Fellowship for securing 93.2% Percentile in GATE-2020.
- Qualified for the National level in NTSE 2013 among 50,000 candidates.
- Secured 2000 rank in TS EAMCET 2015 among 0.25 million candidates.

Extracurriculars

- Member of the NCC contingent participated on 26th January 2017.