

Mounika Kanakanti

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Research Interests

Multimodal Learning

Natural Language Processing

Cognitive Linguistics

Computer Vision

Deep Learning



Education

International Institute of Information Technology (IIIT), Hyderabad

📅 Jan 2020 – Present

MS By Research, Computer Science and Engineering, CGPA: 9.4/10

Advisor: Dr. Manish Shrivastava

INSOFE (certified by CMU)

📅 Sep 2017 – Mar 2018

The Postgraduate Certificate in Big Data Analytics & Optimization [PDF]

Mahatma Gandhi Institute of Technology(MGIT), Hyderabad

📅 Aug 2013 – May 2017

BTech, Computer Science and Engineering, 77%



Research Experience

Research Assistant, LTRC, IIIT Hyderabad

📅 Jan 2020 – Present

Multimodal Learning

Question Answering

Data Scraping Pipeline

Crosslingual NLP

NER

- Worked on multimodal sentiment analysis using CMU-MOSEI and interpretability of multimodal representations
- Built a long-form question answering system on ELI5 dataset by Facebook AI that requires reasoning capabilities and generation of long sentences along with machine comprehension to answer user queries
- Developed a pipeline to collect code mixed text from different social media platforms
- Built a token-level language identification tool for code-mixed text that performs as good as the SOTA benchmark
- Also worked on Named Entity Recognition and Normalisation for Financial Domain and released a dataset generated using Google Knowledge Graph

Research Intern, LTRC, IIIT Hyderabad

📅 June 2019 – Dec 2019

Crosslingual NLP

Question Answering

Sentiment Analysis

Dependency Parsing

- Used tree-based classifiers for aspect based sentiment analysis and performed a thorough analysis on challenges in sentiment analysis for code-mixed text
- Performed a detailed study on linguistic theories for code mixed text and implemented a dependency parser developed on Hindi-English UD treebanks to identify the patterns of code-mixed text
- Developed a factoid question answering system on SQuAD dataset by integrating an external knowledge graph

AI Researcher, Brontobyte Analytics

📅 Apr 2018 – June 2019

Computer Vision

Conversational System

Clinical Documents Analysis

RASA

- Worked on identifying abnormal regions in breast scans(image size > 1GB each) using various computer vision and deep learning techniques
- Built a data creation pipeline for collecting clinical terms from PDF documents (Clinical Practicing Guidelines) using NER models and Apache cTAKES.
- Worked on building a chatbot that takes patient symptoms/concerns as input and returns the probable diseases(ICD Codes) along with their associated complications using the RASA framework

Research Intern, INSOFE, Hyderabad

📅 Jan 2018 – Mar 2018

NLP Machine Learning Hadoop SparkML Streaming data analysis

- Worked on a personality type(Myers Brigg) identification problem using multi-target classification on posts of individuals on a community forum
- Built a GPS monitoring and analysis(clustering) application for Uber trip data using Spark Streaming and Kafka
- Implemented a classification model to predict the label of term deposit(Yes/No) using SparkML

Intern, T-Hub, Hyderabad

📅 Oct 2016 – Dec 2016

Backend Development Sentiment Analysis Hadoop Map Reduce

- Developed a backend for an entertainment-based startup website
- Setup a Hadoop cluster and implemented Mapreduce jobs

Projects

Question-Answer Generation

📅 Dec 2020 – Present

Question Answering TorchScript NER

- Implemented a Answer-Clue-Style aware Question Generation model using GPT2 and built an entailment model to evaluate the questions generated
- Created optimized models using Torchscript that helped reducing the inference time by 20%

SMS-Based Chatbot for Appointment Scheduling

📅 Mar 2019 – June 2019

Dialog System RASA

- Built a conversation system that helps patients to book, reschedule or cancel an appointment and answer other general queries
- Integrated the bot with SMS interface and a feature that could send automatic emails to make it more user-friendly.

Skills

Python	●	●	●	●	●
PyTorch, Keras	●	●	●	●	●
TorchScript	●	●	●	●	●
C, Java, R	●	●	●	●	●
Oracle, SQL Server, Mongo	●	●	●	●	●
NLTK, SpaCy, DyNet	●	●	●	●	●
OpenCV, Librosa	●	●	●	●	●
Hadoop, SparkML, Hive	●	●	●	●	●
Shell scripting, HTML	●	●	●	●	●

Course Work

- Multimodal Machine Learning (CMU 11-777)
- Multimodal Probabilistic Learning of Human Communication (CSCI 535)
- Statistical Methods in AI
- Introduction to NLP
- NLP Applications
- Deep Learning - Theory and Practices
- Information Retrieval and Extraction
- Computational Linguistics: Comp Semantics and Discourse parsing

Certifications

- AI-Deep Learning, EXCELR Solutions
- Data Management and Visualization, Coursera