Venkata Sai Sumanth Sadu

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EDUCATION

University of Southern California, *Los Angeles, CA* *Aug 2022 - Present*
Masters of Science in Computer Science
Courses: Analysis of algorithms, Web Technologies, Applied Natural Language Processing, Database Systems.

Indian Institute of Information Technology, *Sri City, India* *Aug 2018 - Jun 2022*
Bachelors of Technology in Computer Science and Engineering (Hons.)
Courses: Artificial Intelligence, Cloud Computing, Machine Learning, Deep Learning, NLP, Digital Image Processing, DBMS.

WORK EXPERIENCE

Data Scientist at Swiggy, *Bangalore, India* *Jan 2022 - Jul 2022*
- Worked in a location intelligence team to detect and classify incorrectly captured customer locations through GPS. Designed, evaluated, implemented, and maintained an end to end predictive model that processes address text and coordinates and finds if there is a mismatch between captured and actual customer location. The proposed model resulted in a 10% increase in accuracy, and reduced training time.
- Identified how a reverse geocode address could be integrated with customer address text to generate positive labels through perturbation of negative label locations to create synthetic label 1 data on Databricks platform using PySpark.
- Identified, analyzed, and interpreted patterns in complex data sets with multiple relationships to present significant factors that contribute to observed results. Designed and implemented a data pipeline using Python and Snowflake to extract, transform, and load data from centralized data warehouse by writing complex SQL queries.

Research Intern at Advanced Systems Laboratory, DRDO, *Hyderabad, India* *Jun 2021 - Nov 2021*
- Deployed state-of-the-art natural language translation system for speech to speech translation task and modified the video frames to synchronize the lip movements with the translated speech.
- Enhanced and incorporated Hugging Face's transformer-based model for POC of Text Summarization system.

Machine Learning Cloud Engineer at FEBA Technologies Pvt Ltd, *Hyderabad, India* *May 2020 - Apr 2021*
- Designed a course for Amazon machine learning specialty exam with hands-on tutorials for company internal training.
- Designed visualizations and reports to effectively communicate patterns identified through statistical modeling, descriptive statistics and machine learning over core datasets to stakeholders, aiding their comprehension of the business requirements.
- Developed an application for video analytics using Amazon Kinesis to send alerts to ticketing systems if employees are absent at the workplace and to identify multiple entries in CCTV or Webcam to avoid fraud in general public election booths using ML models, OpenCV, deep learning, and computer vision algorithms.
- Constructed an application to search for skilled resources in internal document repositories with all resumes of applicants present. The product will rank resumes and provide candidate demographic information to the talent acquisition team.

PROJECTS

Big Mobility Data Analytics
- Summarized visit behavior at food outlets using geospatial measures and utilized causal learning to investigate changes over time, including descriptive analysis, visualizations, and configuring a predictive model.

Named Entity Recognition model (NER)
- Identified and categorized named entities (such as names, organizations, locations) in unstructured text using Bi-LTSM and experimented with both manually created embeddings (using word indexes) and Glove embeddings.

Product Review Sentiment Analysis and Parts of Speech Tagging
- Performed Data preparation, cleaning, preprocessing, feature extraction, and modeling on Amazon review dataset for Sentiment Analysis. Built POS tagging model on Penn Treebank corpus using Greedy and Viterbi algorithm.

Information Extraction System
- System that can automatically retrieve answers from a knowledge base and can also summarize information. Used Zero-shot Learning, Fine-tuning different versions of transformers, T5 and GPT3 models.

SKILLS

- **Programming Languages:** C, C++, Python, Java, SQL, Javascript, R.
- **Web Development:** Django, Angular, HTML, CSS, Bootstrap, Android studio, Node.js, Flask, REST API, React.js.
- **Tools & Libraries:** Numpy, PyTorch, Tensorflow, Pandas, PySpark, Scikit-learn, PyGame, Matplotlib, SciPy, Keras.
- **Platforms:** Linux, Databricks, AWS, Matlab, Snowflake, GCP, Git, Postgres, MySQL, Tableau, PowerBI, MongoDB.