Goutham P Hegde

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Education

BMS College of Engineering,Bangalore **Aug 2019 – July 2023**

Bachelor of Engineering in Electronics and Communication ***CGPA : 9.13***

Relavent Coursework : Machine Learning, Deep Learning, Data Structures, OOP using C++,Web Technologies , Python Programming,Java Programming,Operating Systems,Computer Networks

Experience

Fidelity Investments **Bangalore, Karnataka**

Software Engineer - Wallet & Blockchain ***August 2023 - Present***

- Led the effort to build a **Multi Factor Authentication** module which is now part of shared library , used by multiple teams across the firm.
- Contributed significantly in building **smart contracts** and **microservices** to support high volume crypto transactions catering to over **150,000 retail customers**
- Built **Search feature** and alerting mechanisms that decreased the overall time spent by users to monitor transactions by 50%

Software Engineering Intern - Distributed Network Capacity Team ***Feb 2023 - July 2023***

- Helped build **end to end visualizations** of **50000+** internal network devices using **Vis.js , D3.js**.
- Designed and built **APIs** for getting information of devices and all its connections, bandwidth of links , link utilization , and saving user configuration and preferences of graphs.

Samsung Research Institute **Bangalore, Karnakata**

Research Intern ***June 2021 - Jan 2022***

- Worked with the voice intelligence team to do **direct speech to speech translation** by preserving emotions.
- Experimented with various **audio feature extraction** techniques like MFCC & Mel Transforms and optimised for hop rate , sampling frequency etc to preserve audio fidelity
- Built an encoder decoder model with **variational auto-encoders with multihead attention** to achieve significant improvement in translation

Projects

Research Paper Recommender Based on NER and NED | *Python, Flask , NLTK, Spcay , Tensorflow* **June 2023**

- Successfully extracted entities like product , method and organisation from scientific data using custom named entity recognition model built upon **Spacy-NER, Bi-LSTM with CRF** to get **96%** accuracy
- Perform **named entity disambiguation** to resolve context and generate Wikipedia links from Wikimedia dataset.
- Using the above mentioned approaches , built a paper recommendation system (useable as website) that provides recommendations from content inside the papers.

Sentiment Analysis of Airline Tweets | *Python, NLTK, Sklearn, Numpy, Pandas, Seaborn* **Sept 2022**

- Analysed more than **14,000** tweets to get meaningful insights from the data .
- Applied **7** classification techniques(including **AdaBoost and Voting Classifier**) to classify the tweets based on their sentiments and did a comprehensive comparison of performance of the different algorithms.Achieved accuracy of **94%** using **Random Forest Classifier**

Automated Review Checker(**In collaboration with Nokia**) | *Python, Flask, Docker,Tensorflow,Spacy* **Aug 2022**

- Built a tool to analyze spelling,grammar,tone and style of writing using **BERT** and Vader.
- Developed a web interface using flask for user convenience , dockerized it into a standalone container application.

Technical Skills

Languages: Python, JavaScript, C/C++, Java, PostgreSQL, MongoDB, HTML/CSS
Frameworks: Node.js, Express.js, Spring and Spring Boot, Angular, Flask
Tools: Git, Docker, Kubernetes, CI/CD, AWS
Libraries: Pandas, NumPy, TensorFlow, OpenCV, Scikit-learn, SciPy, Keras, Spacy

Academic and Research Achievements

Collaboration on text book | *BMSCE* **Oct 2024**

Contributed significantly to a textbook by Dr.K.P Lakshmi on adding implementation of complex data structures named *Data Structures for Everyone.*(currently under review and editing for publication)

Certificate Of Excellence | *Samsung Research* **Jan 2022**

Awarded the certificate of excellence for my contributions to research on direct speech to speech translation.