Venkata Pratyush Kodavanti

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Summary

A Master's student with hands-on experience in Software development and Machine Learning frameworks. A self-motivated individual with strong analytical skills, good communication skills, and a knack for problem-solving through critical thinking

Education

Master of Science in Computer Science: George Mason University (GPA – 3.71) May 2021
Related Coursework: Analysis of Algorithms, Mathematical Foundation for Computer Science, Artificial Intelligence, Component-Based Software Design, Data Mining, Natural Language Processing, Software Engineering for the www, Deep Learning, Data Structures in C.
Bachelor of Technology in Computer Science and Engineering: GITAM University **(**GPA – 3.25**)** April 2016

Work Experience

Graduate Teaching Assistant (George Mason University) Aug 2020 – Present

- Collaborated with the instructor and 5 other TA's to lead labs, taught 60+ students programming in JAVA.

Assistant Systems Engineer - Software Developer (Tata Consultancy Services) March 2017 – June 2018

- Involved in design and development of a web application of **RESTful Web Services using Java and Spring framework**; that links the civil, mechanical, and electrical departments for a petroleum-based client, thereby reducing traffic by 25% on the main webpage.
- Collaborated with **Agile** development team in analysis, design, development, and testing of web-service using **OOPS** in **Java, Spring framework, and MVC (Model View Controller).**
- Written **SQL** queries and procedures for information retrieval, manipulation, and performing operations on a large-scale database of (3TB) with **JDBC** at the back end.

Skills

- **Programming and Databases:** Java, Python, C, SQL, HTML, CSS, JavaScript, Spring, Reactjs.
- **Cloud Computing & Tools:** AWS (EC2, S3, Lambda, Sage maker), Docker, Git, Kubernetes.
- **Machine Learning tools, and languages:** Python (NumPy, Pandas, Scikit-Learn), Pytorch, TensorFlow.

Projects

Multilingual Hate Speech Detection:[Link]- Python, Pytorch, mBERT, LASER, XLMR, Adapters, Tweepy

- Collected real-time tweets from Twitter using **Tweepy**, preprocessed the tweets using data science techniques.
- Used **mBERT** and **LASER embeddings on LR** to train the model, which classifies hate speech over different languages **(47-70% accuracy)**; used **XLMR** and **adapters** on **mBERT** for further improvement **(60-82% accuracy).**

Kinship Classifier:[Link]- Python, TensorFlow, Keras, VGG FaceNet, Resnet 50, Multilayer Network, NumPy

- Created a model which classifies if two people are related by blood by looking at their facial images. Trained the model on more than 500000 image combinations and tested on 100000 image combinations.
- Used Computer Vision methods such as **VGG FaceNet** (accuracy of 67.62%) and **VGG FaceNet** on top of **Resnet50** architecture to achieve an **accuracy of 94.62%.**

Parts of Speech Tagger: [Link]- Python, Pytorch, LSTM, Bi-LSTM

- Built a Parts of Speech Tagging using LSTM and Bi-LSTM from scratch, which identifies the parts of speech on languages that have low resources (few training data sets).
- Added the functionality of Replacement of Unknown words, Early stopping, Batching and Padding, Character Embeddings, pre-trained embeddings (Fast Text), tuning of hyper-parameters to get an accuracy of 85.11%.

Deployed scalable microservices on the cloud- Java, REST API Spring, AWS EKS, Docker, Kubernetes, Jenkins

- Worked on **Angular 8** to create a frontend **JavaScript**-based web page. Using **REST API**- **Spring Boot** and **Java** language in the backend.
- Containerized the application using **Docker** and deployed it on a **Kubernetes** orchestration platform **Amazon Web Services EKS**. Created a git repository and a Continuous Integration and Continuous Deployment **CI/CD pipeline** with the help of **Jenkins** implementing Agile Software Development Life Cycle (SDLC) using DevOps**.**