Pavan Sai Prasanth Sabnaveesu

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Professional Summary

- Applied machine learning algorithms such as all regression models, SVN, random forests, and XGBoost to predict classification and regression to various applications
- Designed and developed full-stack AI based applications using Python, Django, Flask, HTML, CSS, jQuery, and bootstrap as front-end and machine learning, deep learning algorithms, and natural language processing techniques as back-end code
- Experienced working with AI architectures such as CNN, Mask R CNN, YOLOv7, YOLOv8, RNN, LSTM, GAN, and GRU for classification, object recognition, and object segmentation

Key Areas of Expertise

Programming	:	Python (Core & Data Science), R, Data Structures and algorithms
Web development	:	Django, HTML, CSS, jQuery, Bootstrap, Rest-API, and Flask
IDE & Environment	:	Jupyter Notebook, Anaconda, PyCharm, Visual and R-studios
Database	:	SQL, SQLite3, and PostgreSQL
Data Visualization	:	Matplotlib, Seaborn, Plotly, and ggplot3
Machine Learning	:	NumPy, Pandas, and Scikit-learn
Deep Learning & NLP	:	TensorFlow, Keras, Pytorch, Open CV, NLTK, Generative Adversarial Network
Cloud computing	:	Amazon Web Service, Google Cloud Platform, Docker, Kubernetes
Operating System	:	Linux, Windows

Professional Experience

Texas A&M University Kingsville *(Master of Science, Computer Science)*   *January 2023 – Present*
Graduate Research Assistant, **Texas A&M University**   *Feb 2023 – Present*

- Developed convolution neural networks full code without using predefined frameworks using Python
- Implemented detection and segmentation for wind turbines blades using Mask R-CNN and YOLOv7 algorithms using Python, Keras, & TensorFlow
- Researched wind turbine blades detection and segmentation using YOLOv8 with varying IoU thresholds

***NEXT ROW Private Limited** (Software Developer – AI)*   *July 2021 – Dec 2022*
***Meslova Systems Private Limited** (Software Developer – AI)*   *Sept 2019 - June 2021*

Project: Chinese to English language translation using NLTK and wubi

- Cleansed sentences, applied wubi technique, and tokenized given sentences for translation
- Channeled prepared data through encoder, decoder, and applied GRU Architecture to translate text from Chinese to English

Project: Object detection using Keras - Retina Net of satellite and non-satellite images

- Extracted all features by drawing anchor boxes and applying Reginal Proposed Network
- Recognized all objects of aerial and non-aerial images using of Retina-Net architecture
- Designed data pipelines to source data from disparate data sources and rest API framework using Python to enable amazon web service cloud services

API for Detecting Spam Messages using Naive Bayes and NLTK

- Framed a Rest-API for user-friendly access and displayed detected spam messages and deployed entire application using Flask and achieved an accuracy of 95%
- Applied NLP techniques using Naive Bayes classifier to classify different spam messages
- Automated and designed pipelines of cleansing, mapping, and feature engineering for model building using machine learning algorithms for flagging spam messages

Time Series Forecasting of enterprise sales using Seasonal Auto-ARIMA model.

- Visualized and prepared for time-series data using decomposition and stationary process
- Applied and implemented Auto-ARIMA and XGBoost algorithms to forecast sales

Lane detection for self-driving cars using OpenCV

- Applied Canny Edge Detector, defined Region of Interest, masked yellow and white lines
- Transformed data using Hough transformations and was able to identify Hough lines in video and images