**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

**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 with NumPy and Pandas
* 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