**Pavan Sai Prasanth Sabnaveesu**

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# **Professional Summary**

* Experienced professional in building Machine Learning models, Deep Learning architectures, Natural Language Processing, and full-stack web development
* Adept in Machine Learning algorithms such as all Regression models, SVN, Random Forest, and XGBoost to predict classification and Regressor
* Good knowledge and experience with AI architectures such as CNN, MaskRCNN, YOLOv7, YOLOv8, RNN, LSTM, GAN, and GRU for classification, object recognition, and object segmentation
* Experienced in NLP projects such as Data mining,, Machine Translation, Sentiment Analysis, and Chatbots

# **Education**

**Texas A&M University Kingsville**

Master’s in Computer Science **January 2023- Present**

**Sathyabama University** ***July 2014 – April 2018***

*Bachelor of Engineering, Mechanical Engineering*

# **Key Areas of Expertise**

Programming : Python (Core & Data Science), R

Web development : Django, HTML, CSS, jQuery, Bootstrap, Rest-API, and Flask

IDE & Environment : Jupyter Notebook, Anaconda, PyCharm, Visual studio, And R-studio

Database : SQL, SQlite3, MongoDB, 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, Gensim, TextBlob, and Spacy

# **Achievements**

* Participated in a couple of Hackathons’ and accomplished ranks from 300 to 400, where more than 3000 members competed
* Obtained a four-star badge on the Hacker Ranker website for Python programming for completing challenging Python modules
* Presented a journal paper on composite materials at the national conference

**Conference Paper ( About to publish)**

Detection and segmentation of wind turbine blades faults using Mask R-CNN, YOLOV7, And YOLOV8 with different Intersection of union

**Graduate Research Assistant at Texas A&M February 2023- Present**

* Applied Convolution Neural Network from scratch without using predefined frameworks
* Understood different architectures and presented comprehensive literature reviews
* Wind turbines blade detection and segmentation with Mask R- CNN, YOLOv7
* Wind turbine blade detection and segmentation with YOLOv8 different IoU threshold

# **Professional Experience *March 2022 – Nov 2022***

**NEXTROW Private Limited (Software Developer)**

* Designed and developed full-stack 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 backend code.

## **Projects: Source code (**[**GitHub**](https://github.com/prasanthsabnaveesu)**)**

**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

* Developed and presented a couple of product prototypes such as Machine Translation and Face Recognition applications from end to end using Python
* Designed data pipelines to source data from disparate data sources and Rest API framework using Python to enable Amazon Web Service cloud services
* Formulated and deployed production-grade Time-series models to forecast share price using AUTO-ARIMA, SARIMA, and FB-Prophet
* Automated and designed pipelines of cleansing, mapping, and feature engineering for model building using Machine Learning algorithms for flagging spam messages
* Analyzed and clustered unsupervised datasets to discover hidden patterns, data groupings, image analysis, and information retrieval

**Meslova Systems Private Limited (Software Engineer – AI)** ***May 2018 – February 2022***

* Revamped page loading speed by 40% by implementing Lazy loading for web applications
* Streamlined Deep Learning architectures and increased accuracy by 21% for object detection using GPU-accelerated libraries
* Led and implemented Agile methodologies, SVN, and GIT repositories to enable dynamic project management and version controls for production code
* Designed and developed Interfacing components and business logic in numerous modules, handled change requests, and bugs
* Provided Tier III production support and resolved Go-Live issues of clients using the Brute Force method and Trace Points

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**Object detection using Keras - RetinaNet 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 RetinaNet architecture

**API for Detecting Spam Messages using Naive Bayes and NLTK**

* Used various NLP techniques to pre-process multiple texts documents and Naive Bayes classifier of Scikit-Learn to classify different types of spam messages
* 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%

**Time Series Visualization and Forecasting of sales using Seasonal Auto-ARIMA model for sales data analysis**

* Visualized and prepared for time-series data using decomposition and stationary process
* Applied and implemented Auto-ARIMA and FB-prophet 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
* Adept in all phases of Software Development Life Cycle (SDLC), which includes Integration, Implementation, Interaction, Business Analysis/Modeling, Documentation, and Testing of all the software applications
* Proficient in translating algorithms, ideas, and concepts to software applications and other client environment-specific tools to design the client module

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