# Satya Pavan Kumar Pappoppula

## Machine Learning Engineer

Experience: 4.5 Years
Address: Bangalore, India 560075
Phone: 9533732968
E-mail: pavankumar1462@gmail.com

## Summary

Accomplished Machine Learning Engineer with a robust background in software development, data science, deep learning, API integration, and MLOps lifecycle. Proficiency in Python, R, and a diverse array of AI/ML technologies, underscored by a demonstrated history of developing and deploying machine learning models for diverse applications. Proficient in data analysis, computer vision, NLP, and cloud technologies. Proficient in project management and fostering collaborative cross-functional teamwork.

## Skills

- Programming Languages: Python, R
- Machine Learning Libraries: TensorFlow, Keras, PyTorch, Scikit-Learn
- Computer Vision: OpenCV, YOLO, RCNN, Faster RCNN
- Natural Language Processing (NLP): Text Analytics, Sentiment Analysis, Large language modelling, Transformers
- Data Analysis and Visualization: Pandas, NumPy, Matplotlib, Seaborn
- Data Tools: Tableau, Power BI
- Database: MySQL
- Cloud Platforms: AWS, Azure
- Deep Learning: Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Transformer Models
- Version Control: Git
- Model Deployment: Docker
- GenAI: GPT 3, LLAMA 2,Langchain,Huggingface

## Professional Experience

**Machine Learning Engineer**

Namaste Credit, Opendoors Fintech Pvt Ltd, Hyderabad                     (2021-06 – Current)

- Developed and deployed deep learning models for object detection and image processing of Financial and KYC Documents using YOLO, RCNN, and Faster RCNN
- Applied advanced NLP techniques and text analytics to extract and analyse information from financial documents.
- Created Flask applications in Python, hosted and maintained them on cloud servers.
- Conducted data cleaning, exploratory data analysis, and visualization using Python.
- Built machine learning models as per project requirements.
- Assisted in developing and fine-tuning machine learning models for image classification tasks, object detection tasks achieving good accuracy pimprovement.
- Collaborated with fellow engineers to preprocess and augment datasets, improving data quality and model robustness.
- Conducted literature reviews and stayed updated on latest advancements in machine learning and computer vision.

- Presented research findings to team and participated in brainstorming sessions to solve complex problems.
- Implemented queue architecture using celery framework to handle background execution of resource intensive tasks and to maintain scalability.
- Designed and implemented computer vision algorithms to process and analyse image and video data, resulting in 35% reduction in error rates for object detection system.
- Developed NLP models for sentiment analysis and named entity recognition, enhancing customer feedback analysis and improving product recommendations by 20%.
- End To End Machine Learning Project Implementation with Dockers, GitHub Actions and Deployment to cloud (AWS).
- Collaborated with cross-functional teams to integrate machine learning models into production systems through API development, enabling real-time decision-making.
- Conducted A/B testing and model evaluation to continuously optimize performance of machine learning solutions.
- Mentored junior team members, providing guidance on best practices in machine learning and coding standards.

**Automation Engineer**

Aztec Process Automation Pvt Ltd, Hyderabad                              (2019-03 - 2020-12)

- Implemented Python, Siemens, Rockwell software projects as part of a team.
- Implementing forecasting techniques of data science models for equipment failure prediction.
- Trained junior engineers on ML technologies.
- Provided customer support worldwide in collaboration with the US team.
- Prepared design and qualification documents for software projects.
- Conducted CSV validation and qualification of pharmaceutical chambers and equipment.
- Generated process models illustrating automation engineering progress, specifications and details.

**Project Engineer**

Argo Solar Pvt Ltd, Hyderabad                              (2018-06 - 2019-02)

- Managed solar power projects ranging from kilowatts to megawatts.
- Conducted site surveys for Solar PV system design.
- Designed and calculated Solar PV systems based on site conditions.
- Ensured quality installation and team management.

## Projects

**Computer Vision:**

- Automated KYC: Automated data extraction from KYC documents like Pan, Aadhaar, Voter-ID, etc., using YOLO.
- Encryption of KYC Documents: Identified and masked key fields in KYC documents.
- Captcha Process Automation: Automated captcha verification in document verification flow.
- Banking Details Identification: Extracted bank details from bank documents.
- Data Extraction from Financial Documents: Extracted data from financial tables into Excel.
- Anomaly Detection from KYC Documents: Identified forgery in KYC and Banking documents.
- Photo Match: Matched faces in documents and predicted the level of match.
- Signature Match: Matched signatures in documents and predicted similarity.

## NLP:

- Financial Classifications: Identified classifications and sub-classifications for financial documents.

- Crime Check: Predicted sentiment based on entity or organization names.
- Fine-tuning LLM:  Create and put into action advanced generative AI models and algorithms that leverage cutting-edge methods like LLAMA2 for fine-tuning in order to excel in named entity recognition.

**Machine Learning:**

- Equipment Failure Prediction: Predict the state of equipment by analysing the data from sensors.

## Education

- **Post Graduate Diploma: Operations Management**                    (2018-07 - 2020-05)
  Welingkar Institute of Management Development & Re - Mumbai, India
  GPA: 77%
- **B.Tech: Electrical and Electronics Engineering**                    (2012-09 - 2016-05)
  Sri Vasavi Engineering College - AP, India
  GPA: 81.79%
- **Intermediate: M.P.C**                    (2010-06 - 2012-05)
  Aditya Junior College - Tadepalligudem, AP, India
  GPA: 95.8%
- **SSC:**                    (2000-06 - 2010-05)
  Montessori English Medium School - Tadepalligudem, AP, India
  GPA: 92%

## Certifications

- Machine Learning with Python from IBM
- Data Science using R and Python from 360digiTMG
- Machine Learning with Python from IBM
- SQL and Relational Databases from IBM

## Declaration

I hereby declare that the above information is true to the best of my knowledge and belief. I am committed to contributing my skills and knowledge to your organization.
Date:
(Satya Pavan Kumar Pappoppula)