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## **Python-AI Engineer**

- Python-AI Engineer with 2.5+ years of experience in Software development including Machine Learning, Human Motion Data Analysis and writing Python scripts.
- Engaged in the development and continuous enhancement of AI intelligence for various business applications.
- Developed Python scripts to automate access and management of AWS S3 buckets, EC2 servers, Gmail accounts, Google Docs, Google Drives, and other relevant platforms, significantly reducing the need for manual intervention and streamlining workflows.
- Have experience in managing EC2 servers, developing AWS Lambda functions, and storing logs in the AWS server.
- As an Engineering Research Fellow at IIIT SriCity, I successfully collaborated on an impactful Deep Learning project titled "An Embedded Deep Learning-Based Traffic Advisory System." This significant contribution led to its publication in the prestigious IEEE ICRAIE conference in 2020.

Technical Skills:		
Hardware / Platforms	Linux, Windows, Raspberry Pi, Arduino.	
Languages	Python, C, Java.	
Tools and Frameworks	AWS, TensorFlow, OpenCV, Unity, Flask, Firebase, Heroku.	
IDE's	Jupyter notebook, VSCode, PyCharm, Spyder, Android Studio.	

### **Educational Qualifications:**

• Electronics and Communication Engineering, B.Tech, IIIT Sricity (2021)

#### **Certifications:**

- Machine Learning with Python by IBM (Coursera)
- Machine Learning Stanford (Coursera)
- Machine Learning with Python by CODE QUEST.

#### **Research Publications:**

# An Embedded Deep Learning Based Traffic Advisory System, IEEE ICRAIE, 2020.

- Developed a deep learning-based traffic advisory system for real-time traffic analysis and Implemented two different deep learning frameworks, YOLOv3 and Tiny YOLOv3, to improve inference time while maintaining accuracy and scalability.
- Performed a comparative analysis of four deep learning techniques (YoloV5, SSD, Faster RCNN, and EfficientDet) to assess their performance in vehicle detection.
- Demonstrated strong problem-solving and analytical skills in optimizing the traffic advisory system for enhanced real-time performance and accuracy route optimization.

## **Research Paper**

## **Key Project:**

## [A]: Second hand car price prediction:

**Technology:** Python, Flask and Heroku.

Team Size: 2 Role: Tech Lead Description:

A web application was created using Flask, enabling users to predict the selling price of their cars. The application utilizes data from online open sources and employs several machine learning algorithms to develop the best model. This model was then deployed on the Heroku cloud platform, ensuring convenient accessibility and scalability for users.

#### **Responsibilities:**

- Created the web application using Flask.
- Utilized a range of Machine Learning algorithms, including SVM, to identify the optimal model.
- Implemented project deployment on the Heroku cloud platform.

## **Professional Experience:**

#### [A]: Taiyo - Internship (3-months):

**Technology:** Python, Python libraries like Requests, Scrapy, Beautifulsoup, Matplotlib and Seaborn.

**Team Size:** 3 **Role:** Data Analyst.

**Description:** 

Collected data from a variety of open-source websites using APIs and stored it in a data storage system. Conducted data cleaning processes to ensure data quality and prepared the collected data for analysis. Employed data visualization techniques to create meaningful visualizations that effectively communicated insights to stakeholders and facilitated decision-making.

#### **Responsibilities:**

- Conducted web scraping and parsing of HTML documents to extract the desired data.
- Ensured the collected data was clean and ready for further analysis and visualization.

## [B]: PtMantra - Human motion tracking and analysis (2021-present) (Full-Time):

**Technology:** OpenCV, Tensorflow, Python, Flask, Unity, Data Analytics and AWS.

Team Size: 10

**Role:** Python-AI Engineer

**Description:** 

Deep learning-based human motion tracking on mobile devices to analyze user workouts, including sets, reps, hold duration, and repetitions, utilizing AI techniques.

#### **Responsibilities:**

- Improving the AI algorithm to count reps in human motion data.
- Handling AI servers.
- Generating the test data(3D animations) in unity using real data for AI validations.
- Developed Python scripts for streamlined management of AWS S3 buckets and EC2 servers.
- Developed Python scripts to automate tasks and enhance workflow efficiency by reducing manual intervention.
- Implemented a system that utilizes crontab to schedule the daily storage of logs from all servers into an S3 bucket. Additionally, developed Lambda functions within the AWS server to facilitate this process effectively.