**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that the project work and report entitled “**MLOps Training - Applying Machine Learning On DevOps”** embodies the original work of **Mr. Vikram Singh** from **SRM Institute of Science and Technology** (B.Tech – Computer Science) at **LinuxWorld Informatics Pvt Ltd**

The duration of the project undergone as mentioned above, under the mentorship of Mr. Vimal Daga, Technical Head was from **10th May, 2020 to 12th June, 2020**.

**Gist About the Project:** As in the companies when employees get hired, HR is the one who decides the salary based on multiple criteria one could be: number of years of experience he/she has. Deciding the salary of employees according to what he/she deserves could be an important task. As HR being a non-technical person might not be familiar with high-end technologies.

I’ve created a project using technologies like **Machine Learning and DevOps approach**. I’ve provided a **web-interface** where an HR writes the number of years of experiences an employee has and using a Machine Learning regression algorithm it **predicts the estimated salary**. Also, we can update the data and it automatically updates the current data to the latest data provided and predicts accordingly.

**Technologies Used:** I’ve used **Machine Learning Linear Regression Algorithm** as the data contains two columns namely: Years of Experience and Salary. Using the historical data we can predict the salary of an employee.

**Technologies Used- Machine learning concepts:**

* **Deep Learning:-** It helps to predict my model with good accuracy.
* **R-CNN:- It is used for object detection in my model.**
* **CNN(Convolutional Neural Networks):- It is used during training of models and helps to increase the accuracy of models.**

**Training of model:**

* **Supervisely:- It helps in annotations for my dataset.**
* **AWS(Amazon Web Services):- In this I launch the Deep Learning ami instance for training my model.**

Also, I’ve created a **Docker environment** using the concept of **containerization** we can create a separate environment where we train our machine learning model. So that we don’t face any dependencies issue. I’ve also used **Jenkins for CI/CD** as it pulls the ML code and data from **GitHub** and does the further **automatic process**.

**Conclusion:** The whole process is when the developer pushes the ML model with the dataset to **GitHub, Jenkin**s being a **CI/CD tool** **pulls** the code automatically as soon as it senses the code has been uploaded to some **Source Control Management System** and perform the task i.e building **Docker images** and run our **ML code** in a docker environment.

Also with the help of a web-server, it provides a URL from which we can access the webpage. For this complete pipeline, an admin will be up-to-date where the process is executing and what all processes it has completed by sending admin an email automatically.

**Future Scope**: Yes, it has a future scope as we can deploy it on a **Mobile App** which would be much easier to manage.

We wish him all the success for his future