Data Science Technology and Systems PG (11523)

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A PDF document with the following:

**Link to the Tableau Dashboard**

* Tableau Dashboard: <https://public.tableau.com/app/profile/rohit.baral/viz/tableau_part/Dashboard1>

1. **The results of the (regression and classification) trained models on the test data. These results must be listed in two tables: one for the regression and another for the classification.**
   1. **Regression Model:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Regression Models** | **MSE** | **RMSE** | **R-squared** |
| Linear Regression Model 1 | 0.0877 | 0.2963 | 0.2144 |
| Linear Model 2 (SGD) | 0.1157 | 0.3401 | 0.4866 |

* 1. **Classification Model:**

Confusion Matrix: (Class 0 vs Class 1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Classification Models** | **True**  **Positive** | **True**  **Negative** | **False**  **Positive** | **False**  **Negative** |
| Decision Tree | 826 | 373 | 119 | 117 |
| Random Forest | 835 | 397 | 108 | 95 |
| KNN | 846 | 335 | 97 | 157 |
| Logistic Regression | 876 | 329 | 67 | 163 |

Classification Report:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Classification Models** | **Accuracy** | **Class** | **Precision** | **Recall** | **F1 -**  **score** |
| **Logistic Regressor** | **84%** | Class 0 | 84% | 93% | 88% |
| Class 1 | 83% | 67% | 74% |
| **Random Forest** | **85%** | Class 0 | 89% | 88% | 89% |
| Class 1 | 78% | 80% | 79% |
| **Decision Tree** | **83%** | Class 0 | 87% | 87% | 87% |
| Class 1 | 76% | 75% | 75% |
| **KNN** | **88%** | Class 0 | 84% | 89% | 86% |
| Class 1 | 77% | 68% | 72% |

1. **The list of commands you have used to deploy your source code to the GitHub repository.**
   1. *Initializing the Git:*

git init

* 1. *Check the Status:*

Git status

* 1. *Staging:*

git add .

* 1. *Committing Git:*

git commit -m “Assignment Complete Notebook”

* 1. *Setting Up Remote repository and Pushing to Git hub:*

git remote add origin https://github.com/baralrohit/DSTS\_sem3/tree/main/assignment\_1

git branch -M main

git push -u origin main

1. **The list of commands you have used to create and push the Docker image to the Docker Hub.**
   1. *Building the Docker Image:*

**docker build -t r99baral/dsts-model:latest .**

* 1. *Running the Docker Container:*

**docker run r99baral/dsts-model:latest**

* 1. *Tagging the Docker Image:*

**docker tag r99baral/dsts-model:latest**

* 1. *Docker Hib Login:*

docker login -u r99baral

* 1. *Pushing the Image to Docker Hub:*

**docker push r99baral/dsts-model:latest**

1. **The Link of the source code you have deployed on GitHub (please add me as a collaborator; my GitHub account is radwanebrahim@gmail.com)**
2. **The link to the Docker image you deployed on the Docker Hub.**

# **docker pull r99baral/dsts-model**