

## Assignment - 1

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Unit Name: Data Science Technology and Systems PG (11523)

Name: Jigme Tharchen

Email: [u3259505@uni.canberra.edu.au](mailto:u3259505@uni.canberra.edu.au)

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### 1. Link to Tableau Dashboard

[https://public.tableau.com/views/dsts-assignment1/Dashboard1?:language=en-US&:sid=&:redirect=auth&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/dsts-assignment1/Dashboard1?:language=en-US&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link)

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### 2. Results for the regression models

Sl.no	Regression Model	Mean Score error
1	Linear Regression	0.19898
2.	SGDRegressor	0.19092

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### 3. Results for the Classification Models

Sl.no	Classification Model	Accuracy
1	LogisticRegression	0.7229
2	RandomForest	0.6930
3	DecisionTree	0.6273
4	MLPClassifier	0.7289

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## 4. List of commands used for GitHub

### Local Repository Setup

1. **Git Initialization**
    - **Command:** `git init`
    - **Explanation:** Initialize a new local Git repository in your project folder.
  2. **Checking Status**
    - **Command:** `git status`
    - **Explanation:** Shows the state of the working directory, including untracked and modified files.
  3. **Staging Files**
    - **Command:** `git add .`
    - **Explanation:** Stages all changes (new, modified, or deleted files) in the directory for the next commit.
  4. **Committing Changes**
    - **Command:** `git commit -m 'initial commit'`
    - **Explanation:** Commits the staged changes with a message, saving a snapshot in your local repository.
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### Remote Repository Setup

5. **Adding Remote Repository**
    - **Command:** `git remote add origin git@github.com:Jigme96-BHU/dsts-assignment1.git`
    - **Explanation:** Links your local repository to the GitHub remote repository, called origin.
  6. **Setting Main Branch**
    - **Command:** `git branch -M main`
    - **Explanation:** Renames the default branch to main
  7. **Pushing to Remote Repository**
    - **Command:** `git push -u origin main`
    - **Explanation:** Pushes the main branch to the remote repository
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## 5. List of commands used for Docker Hub

### Building the Docker Image

- **Command:** `docker build -t dsts-assignment .`
- **Explanation:** Builds a Docker image from the Dockerfile in the current directory and tags it as `dsts-assignment`.

### Running the Docker Container

- **Command:** `docker run -p 7001:7001 dsts-assignment`
- **Explanation:** Runs the Docker container for the `dsts-assignment` image, mapping port `7001` of the container to port `7001` on the host machine.

### Tagging the Docker Image

- **Command:** `docker tag dsts-assignment jigme26/dsts-assignment`
- **Explanation:** Tags the `dsts-assignment` image with a new tag for Docker Hub, `jigme26/dsts-assignment`, to prepare for pushing it to Docker Hub.

### Logging into Docker Hub

- **Command:** `docker login`
- **Explanation:** Prompts you to log into Docker Hub by entering your Docker Hub credentials.

### Pushing the Image to Docker Hub

- **Command:** `docker push jigme26/dsts-assignment`
- **Explanation:** Pushes the tagged `jigme26/dsts-assignment` image to your Docker Hub repository.

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## 6. GitHub Link:

<https://github.com/Jigme96-BHU/dsts-assignment1.git>

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## 7. Docker hub Link:

`docker pull jigme26/dsts-assignment`