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Unit Name: Data Science Technology and Systems

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Assignment I

- a. Link to the Tableau Dashboard
⇒ [Sydney Restaurants-Tableau Dashboard | Tableau Public](#)
- b. 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

REGRESSION MODELS:

MODEL	MSE
MODEL_1	0.090
MODEL_2	0.090

CLASSIFICATION MODELS:

MODEL	ACCURACY
RANDOM FOREST	0.865
K-NEAREST NEIGHBORS	0.874
SUPPORT VECTOR MACHINE	0.810

- c. The list of commands you have used to deploy your source code to the GitHub repository

⇒ Git hub : [bbhattarai127/dsts-assignment-1 \(github.com\)](https://github.com/bbhattarai127/dsts-assignment-1)

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git status
On branch part-a
Your branch is up to date with 'origin/part-a'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   part-a.ipynb
        modified:   part-b.ipynb

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        images/PART QUESTION 1.png
        images/newplot.png
        part-b_fixed_warnings_fixed.py

no changes added to commit (use "git add" and/or "git commit -a")
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git add .
warning: in the working copy of 'part-a.ipynb', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'part-b.ipynb', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'part-b_fixed_warnings_fixed.py', LF will be replaced by CRLF the next time Git touches it
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)>
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git commit -m "completes part A and Part B"
[part-a 88a9ab0] completes part A and Part B
 5 files changed, 2946 insertions(+), 1200 deletions(-)
 create mode 100644 images/PART QUESTION 1.png
 create mode 100644 images/newplot.png
 create mode 100644 part-b_fixed_warnings_fixed.py
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git push
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (8/8), 1.03 MiB | 1.37 MiB/s, done.
Total 8 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/bbhattarai127/dsts-assignment-1.git
 8528fbd..88a9ab0  part-a -> part-a
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)>

PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git add .
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git commit -m "initial commit"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'bhbat@binishBhattarai.(none)')
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git config --global user.name "Binish Bhattarai"
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git config --global user.email "bbhattarai127@gmail.com"
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git commit -m "initial commit"
[main (root-commit) 8751317] initial commit
 5 files changed, 11561 insertions(+)
 create mode 100644 Predictive Modelling and Deployment.pdf
 create mode 100644 data/sydney_geojson
 create mode 100644 data/zomato_df_final_data.csv
 create mode 100644 marking_sheet.pdf
 create mode 100644 part-a.ipynb
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git status
On branch main
nothing to commit, working tree clean
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git remote add origin https://github.com/bbhattarai127/dsts-assignment-1.git
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)> git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (8/8), 3.08 MiB | 1.92 MiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/bbhattarai127/dsts-assignment-1.git
 * [new branch]    main -> main
branch 'main' set up to track 'origin/main'.
PS C:\Users\bhbat\OneDrive\Desktop\Data Science Technology and Systems PG\ASSIGNMENT (I)>
```

- d. The list of commands you have used to create and push the Docker image to the Docker Hub

```
C:\Users\bbhat>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

```
C:\Users\bbhat>docker run bbhattarai127/dsts-models:latest
```

Unable to find image 'bbhattarai127/dsts-models:latest' locally

latest: Pulling from bbhattarai127/dsts-models

302e3ee49805: Download complete

4c0965d39195: Download complete

92529a43c4f3: Download complete

fdeec85abba: Download complete

0f38ef44524a: Download complete

0e0a598529e6: Download complete

62a08b8dd4f5: Download complete

Digest:

sha256:3ded3b8a8ac1246b5a373a2b08bbe77129feaad013640299333cac14bfd5fcbd

Status: Downloaded newer image for bbhattarai127/dsts-models:latest

Linear Regression Model 1:

R2 Score: 0.303610715895395

Mean Squared Error: 0.09035676410119767

Mean Absolute Error: 0.19650246471812474

Root Mean Squared Error: 0.30059401873822716

Gradient Descent Model 2 (with Scaling):

R2 Score: 0.30328207102612015

Mean Squared Error: 0.09039940589308612

Mean Absolute Error: 0.19721672491980025

Root Mean Squared Error: 0.3006649395807335

Accuracy: 0.8104761904761905

```

Microsoft Windows [Version 10.0.22631.4169]
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C:\Users\bbhat>docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS        NAMES

C:\Users\bbhat>docker run bbhattarai127/dsts-models:latest
Unable to find image 'bbhattarai127/dsts-models:latest' locally
latest: Pulling from bbhattarai127/dsts-models
302e3ee49805: Download complete
4c0965d39195: Download complete
92529a43c4f3: Download complete
fdeeec85abba: Download complete
0f38ef44524a: Download complete
0e0a598529e6: Download complete
62a08b8dd4f5: Download complete
Digest: sha256:3ded3b8a8ac1246b5a373a2b08bbe77129feaad013640299333cac14bfd5fcbd
Status: Downloaded newer image for bbhattarai127/dsts-models:latest
Linear Regression Model 1:
R2 Score: 0.303610715895395
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Root Mean Squared Error: 0.3006649395807335

Accuracy: 0.8104761904761905

```

- e. The Link of the source code you have deployed on GitHub (please add me as a collaborator; my GitHub account is radwanebrahim@gmail.com)
 ⇒ [bbhattarai127/dsts-assignment-1 \(github.com\)](https://github.com/bbhattarai127/dsts-assignment-1)
- f. The link to the Docker image you deployed on the Docker Hub
 ⇒ <https://hub.docker.com/r/bbhattarai127/dsts-models>