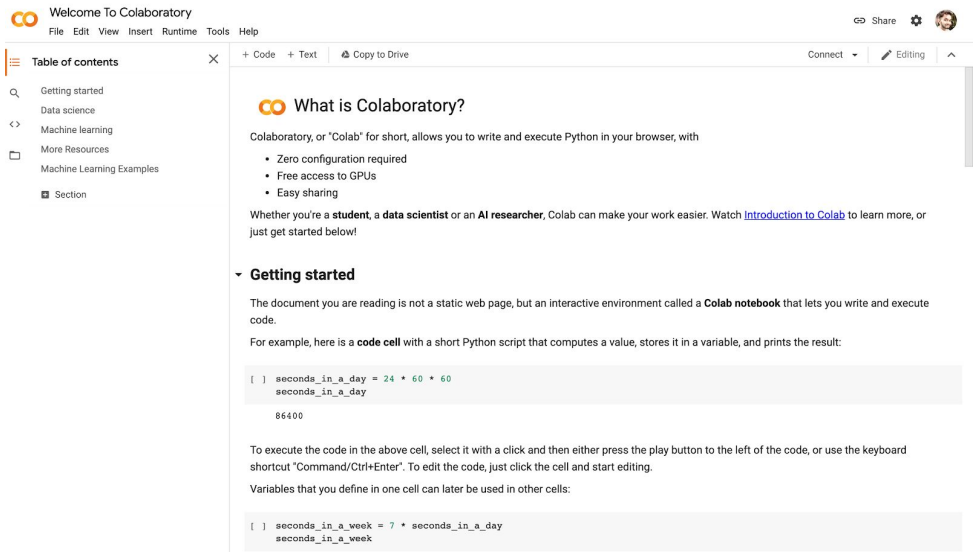
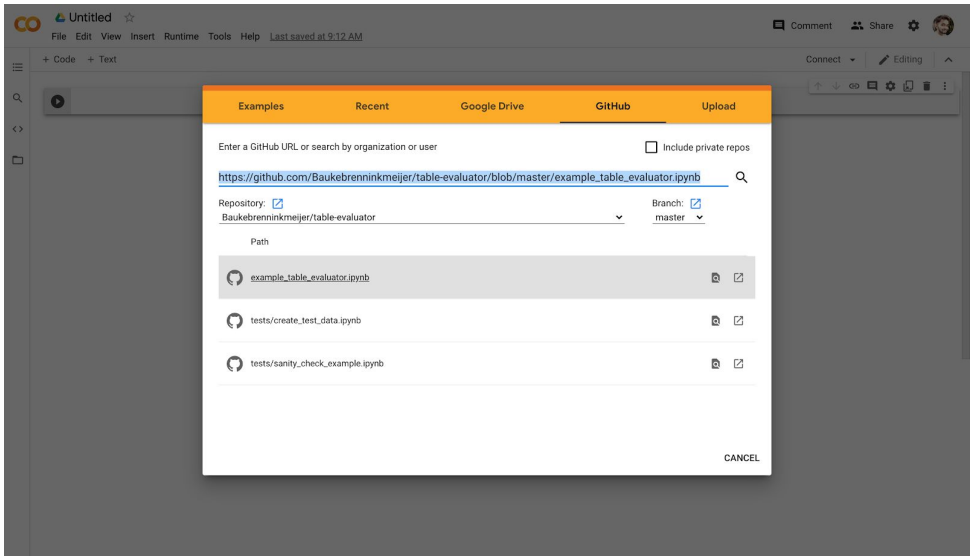
Please go through the following steps to produce table evaluator graphs,

1) Go to https://colab.research.google.com/notebooks/intro.ipynb. A page appears similar to the below shown screen shot.

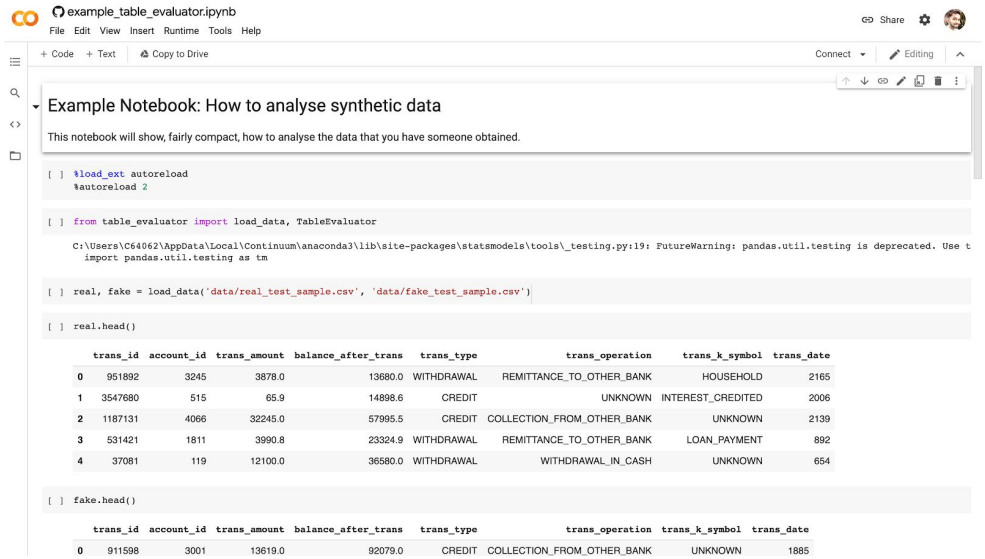


2) Click on the '**file tab**' on top left and click on the '**new notebook**'.
3) Again go to the file tab and click on '**open notebook'**.
4) Select the '**Github**' tab.
5) Paste the link https://github.com/Baukebrenninkmeijer/table-evaluator/blob/master/example_table_evaluator.ipynb in the tab and search for repositories.

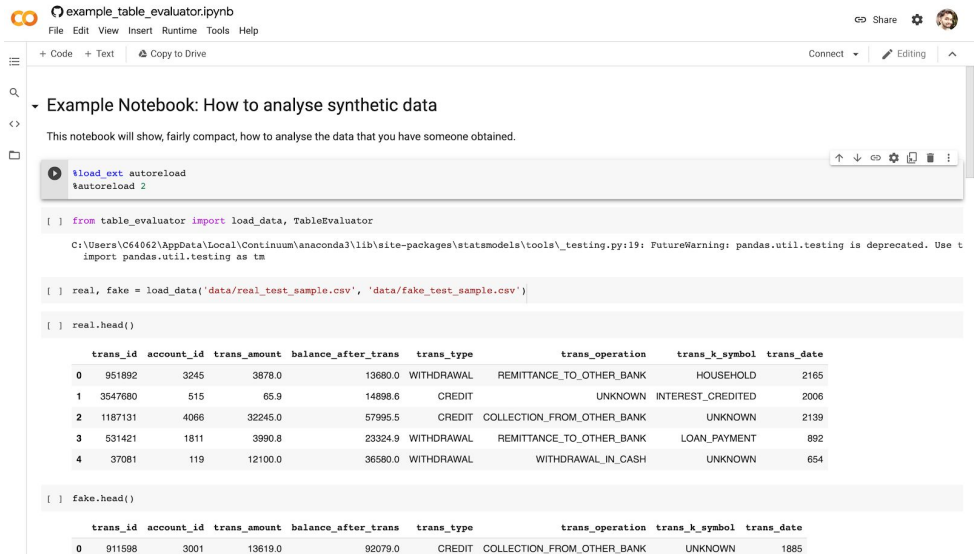


6) Click on '**example_table_evaluator.ipynb**' and the repository will open.

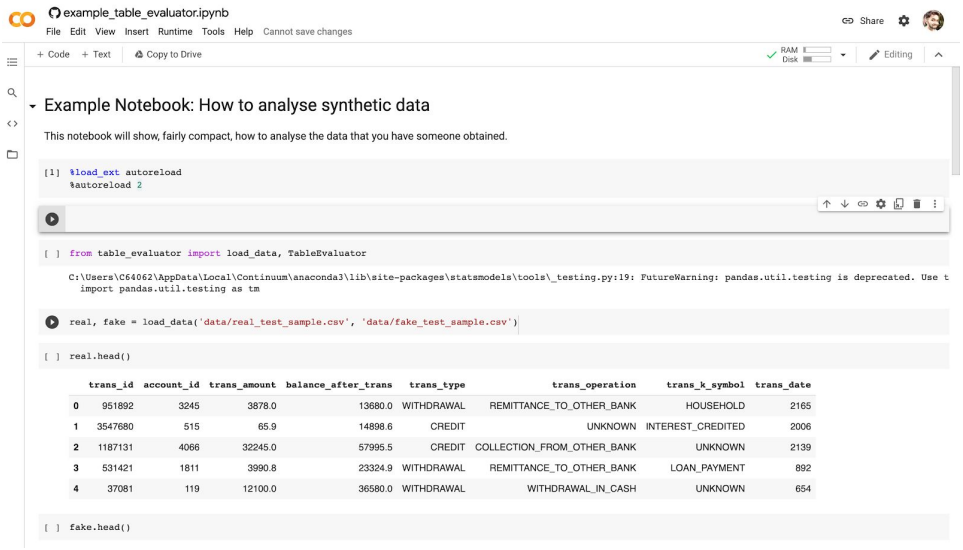
7) The repository will open and the codes will appear as shown.



8) Run the first cell by clicking on the play button.



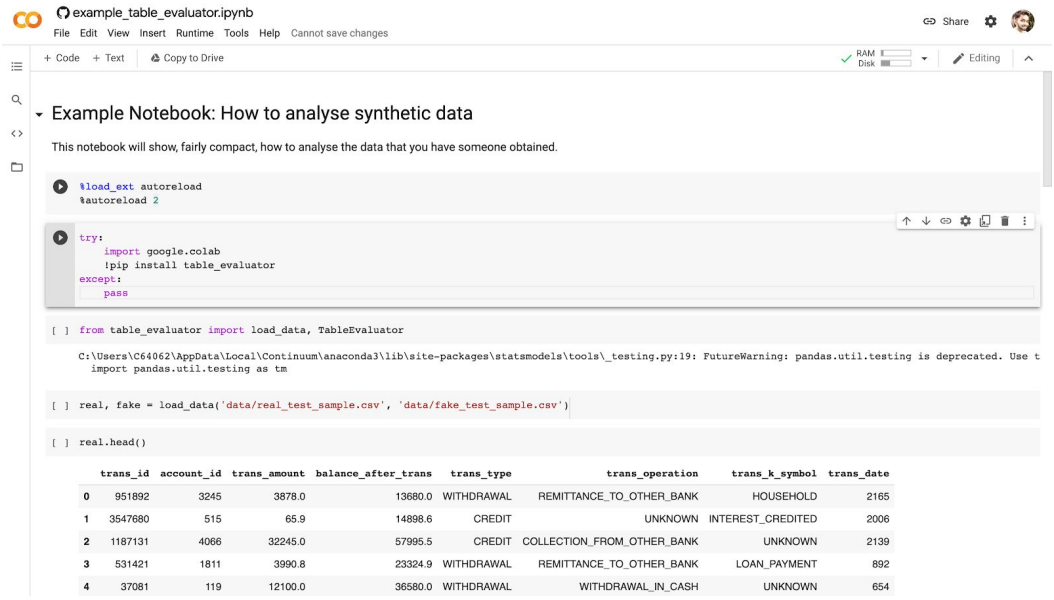
9) Click on Run anyway if prompted.
10) After running, click on the first tab and then select '**+code**' on the top left of the screen. This will create a new cell to add code.
11) A new code-cell window appears as shown



12) Paste the following code on the new tab that appears.

```
try:
    import google.colab
    !pip install table_evaluator
except:
    pass
```

After pasting Colab must look as shown,

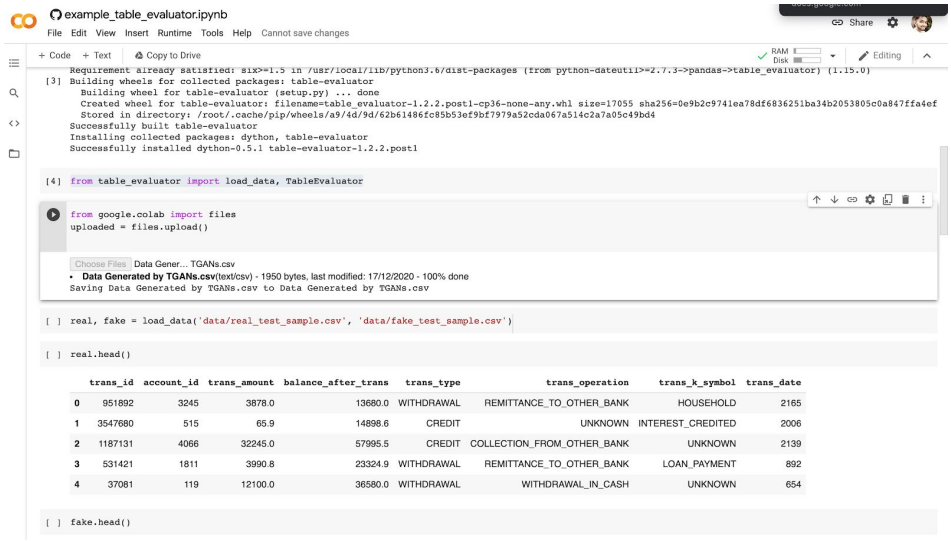


13) Run the second and third cell respectively. (DO NOT run the 4th cell -(`real, fake = load_data('data/real_test_sample.csv', 'data/fake_test_sample.csv')`)

14) After running the above cells, add another cell by using '**+ code**', paste the following code and run the tab

```
from google.colab import files
uploaded = files.upload()
```

15) A page appears as shown below, click on '**choose files**' and select the csv file provided separately with these codes. Here we upload the data generated by the generator separately for three different algorithms, i.e, TGANs, RBMs and VAEs. Please select any of the three files(one at a time) in the tab and run it.

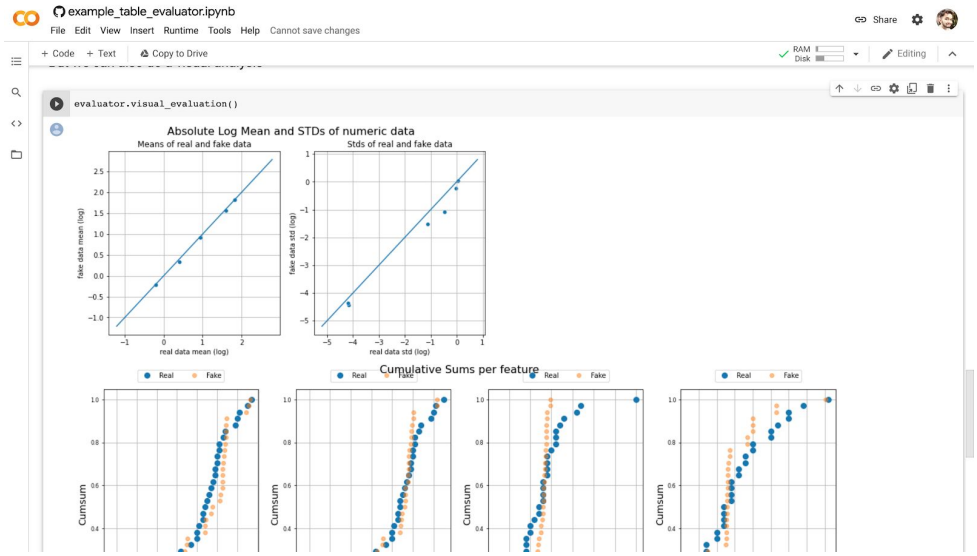


16) Again click on '**+ code**' and copy the same code from step 14. Upload the file separately, and this time upload the file '**Real Data.csv**' into the code and run it.
17) After uploading, replace the code in the next cell (`real, fake = load_data('data/real_test_sample.csv', 'data/fake_test_sample.csv')`) with code (real, fake = load_data('Real Data.csv', 'Data Generated by TGANs.csv')) and run it.

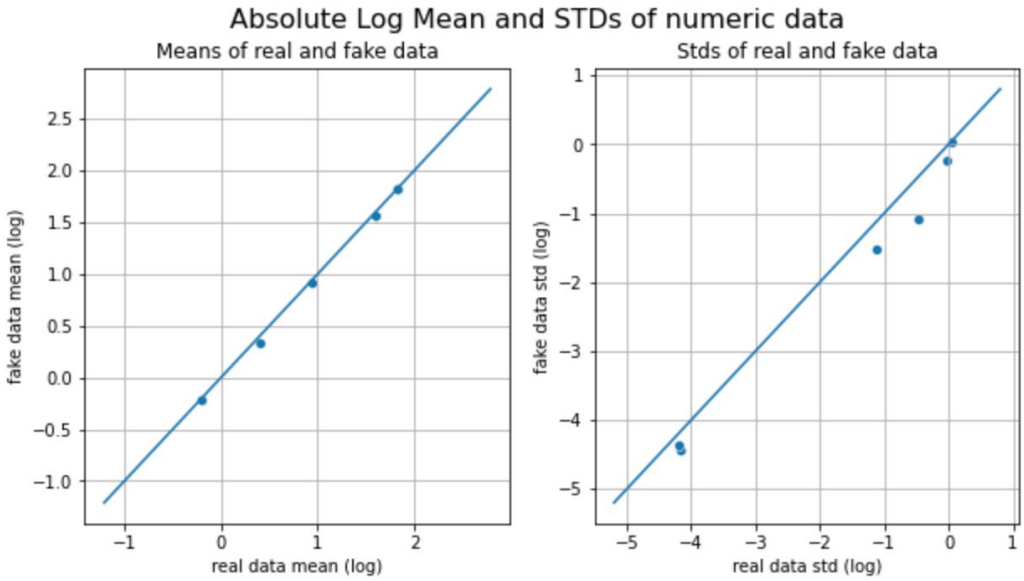
Note:- Everytime you re-run the cell for any different data like the '**Data generated by VAEs**'(as given separately with this code). Please change the code that you will paste in step 17 by using 'Data generated by VAEs.csv' in place of 'Data Generated by TGANs.csv'. Please do the same for RBMs.

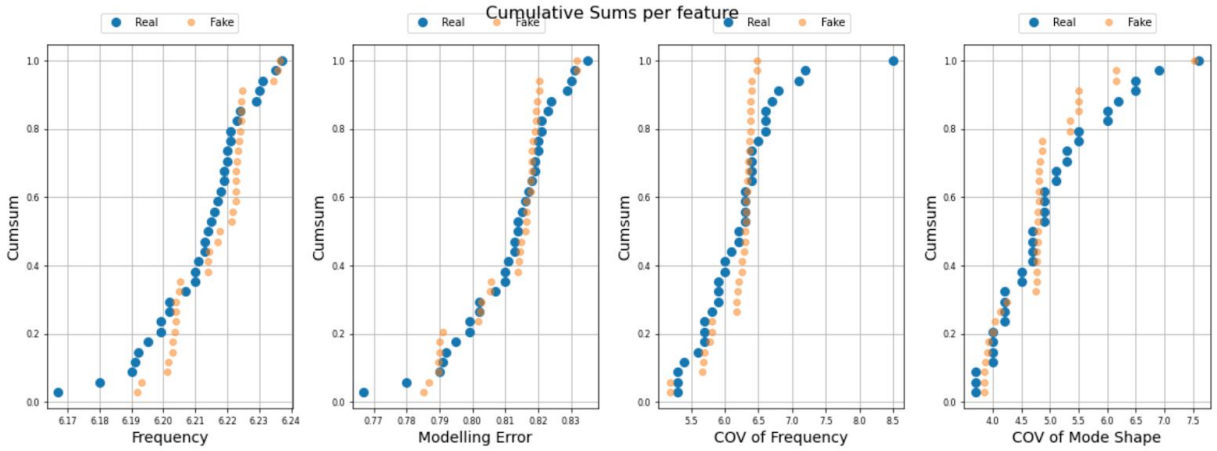
18) Run the next two codes (`real.head() and fake.head()`)
19) Avoid the next column and don't run it. (`cat_cols = ['trans_type', 'trans_operation', 'trans_k_symbol']`)
20) Directly go to the next code (`evaluator = TableEvaluator(real, fake, cat_cols=cat_cols)`) and replace it with (evaluator = TableEvaluator(real, fake)) and run it.
21) Avoid the next code and don't run it (`evaluator.evaluate(target_col='trans_type')`)

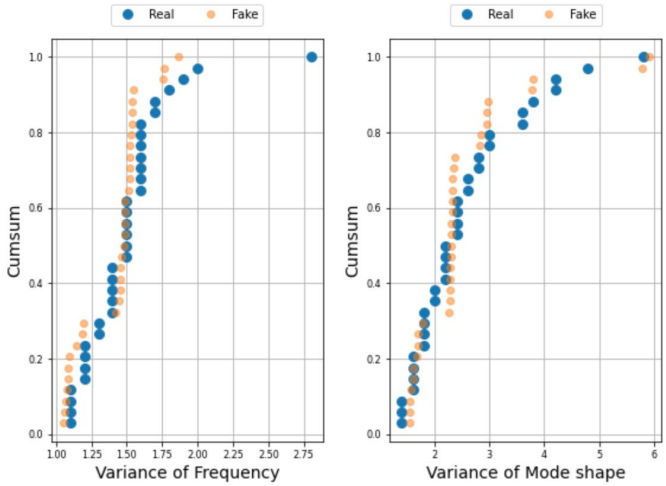
22) Run the next code as it as (`evaluator.visual_evaluation()`)
23) The graphs that are used the manuscript will be generated and will be obtained there.

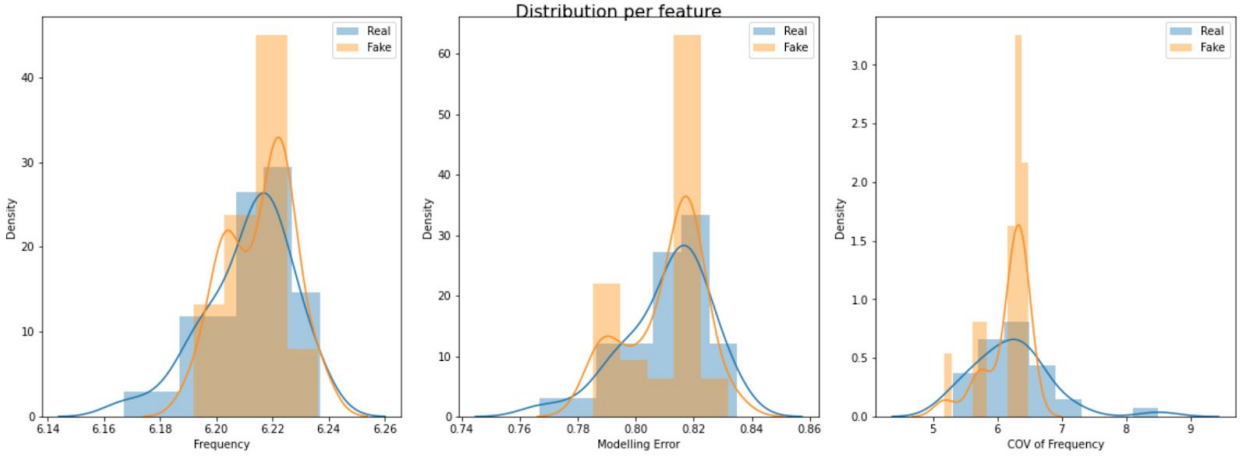


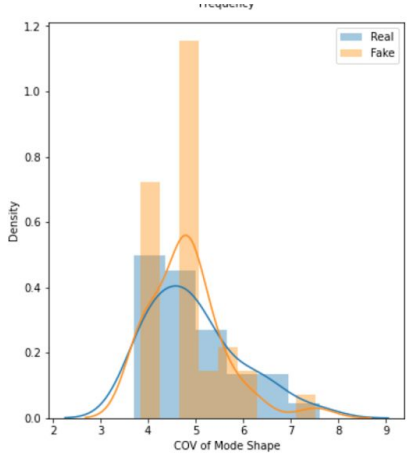
24) Please look for graphs that are pasted below and not other graphs. Also, run the code separately for each dataset in a similar manner by just uploading the different dataset provided along with this code document.

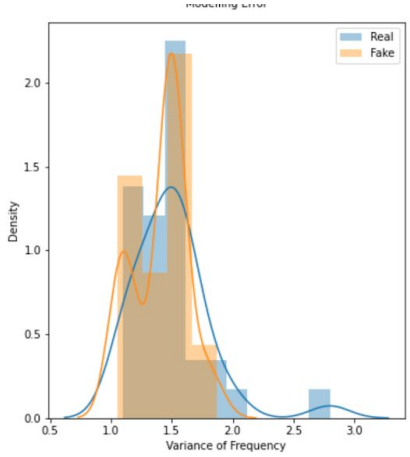


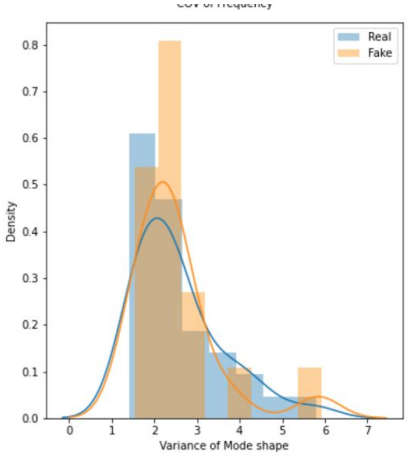

Cumulative Sums per feature
Real
Fake
Cumsum
Frequency
Modelling Error
COV of Frequency
COV of Mode Shape

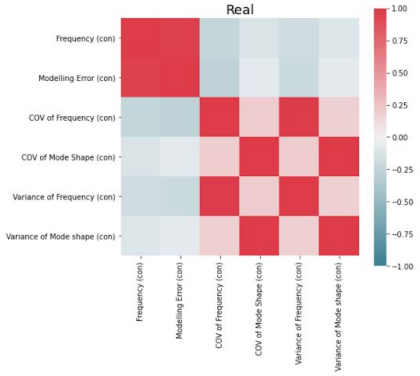

Real
Fake
Cumsum
Variance of Frequency
Variance of Mode shape


Distribution per feature
Real
Fake
Density
Frequency
Modelling Error
COV of Frequency


Real
Fake
Density
COV of Mode Shape


Real
Fake
Density
Variance of Frequency


Real
Fake
Density
Variance of Mode shape


Real
Frequency (con)
Modelling Error (con)
COV of Frequency (con)
COV of Mode Shape (con)
Variance of Frequency (con)
Variance of Mode shape (con)

Fake
Frequency (con)
Modelling Error (con)
COV of Frequency (con)
COV of Mode Shape (con)
Variance of Frequency (con)
Variance of Mode shape (con)

Difference
Frequency (con)
Modelling Error (con)
COV of Frequency (con)
COV of Mode Shape (con)
Variance of Frequency (con)
Variance of Mode shape (con)