

Environment:

Make sure to run all the codes in the kaggle environment for reproducibility and RAM out of memory error issue as I have used kaggle to code because of more RAM allotment.

Steps:

1. Open a kaggle notebook
2. Add data (your data will remain private, so no worries)
  1. Data folder is attached in the solution folder (you can directly upload the folder or the zipped version, also attached in the solution folder)
    - i. Name: fia-zindi-kp-data
      1. This folder contains training data downloaded from ITU website
        - a. `Imgs_2023050915314323740`
      2. Test data downloaded from zindi
        - a. `Fault-impact-analysis-towards-service-oriented-network-operation-maintenance20230801-4526-d7bath`
    - ii. If you decide to download and create your own folder, make sure to place both training and test in same folder and change path in the notebook.
3. Go to notebook options and make sure the following values are in following fields:
  1. Accelerator: None
  2. Language: Python
  3. Persistence: No Persistence
  4. Environment: Pin to original environment (2023-07-10)
  5. Internet: on
  6. The above values are all default but please make sure by checking once
4. In all the notebooks, please change the data location while reading train, test csv according to the name you have given to the private data.
5. Import notebook, upload and Run **FIA\_ZINDI\_KP\_DATA\_CREATION**
  1. Save and commit this notebook (top right corner)
  2. The output of this notebook is the processed train/test file to be use later in all the notebooks. Once you commit you can directly import the output of this notebook to the other notebooks.



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## FIA\_ZINDI\_KP\_DATA\_CREATION

Python · [FIA-ZINDI-KP-DATA](#)

Notebook Input Output Logs Comments (0) Settings

Run

315.5s

This notebook should take around 315 seconds.

6. Open another notebook in another tab (add processed data from previous notebook) > click on add data > click on your notebooks > **FIA\_ZINDI\_KP\_DATA\_CREATION** will appear > select it. Now clicks on file (top left) > click on Import notebook > upload, Run, Save and commit **FIA\_ZINDI\_KP\_V4**



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## FIA\_ZINDI\_KP\_V4

Python · [FIA\\_ZINDI\\_KP\\_DATA\\_CREATION](#)

Notebook Input Output Logs Comments (0) Settings

Run

744.1s

This notebook should take around 750 seconds.

7. Open another notebook in another tab > click on add data > click on your notebooks > **FIA\_ZINDI\_KP\_DATA\_CREATION** will appear > select it. Now click on file (top left) > click on Import notebook > upload, Run, Save and commit **FIA\_ZINDI\_KP\_V5**



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## FIA\_ZINDI\_KP\_V5

Python · [FIA\\_ZINDI\\_KP\\_DATA\\_CREATION](#)

Notebook Input Output Logs Comments (0) Settings

Run

399.0s

This notebook should take around 400 seconds.

8. Open another notebook in another tab > click on add data > click on your notebooks > **FIA\_ZINDI\_KP\_DATA\_CREATION** will appear > select it. Now click on file (top left) > click on Import notebook > upload, Run, Save and commit **FIA\_ZINDI\_KP\_V6**

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## FIA\_ZINDI\_KP\_V6

Python · FIA\_ZINDI\_KP\_DATA\_CREATION

Notebook Input Output Logs Comments (0) Settings

Run

650.2s

This notebook should take around 650 seconds.

9. Open another notebook in another tab > click on add data > click on your notebooks > **FIA\_ZINDI\_KP\_DATA\_CREATION** will appear > select it. Now click on file (top left) > click on Import notebook > upload, Run, Save and commit **FIA\_ZINDI\_KP\_V7**

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## FIA\_ZINDI\_KP\_V7

Python · FIA\_ZINDI\_KP\_DATA\_CREATION

Notebook Input Output Logs Comments (0) Settings

Run

1127.5s

This notebook should take around 1130 seconds.

10. Open another notebook in another tab (add output of v4,v5,v6,v7 notebooks) > click on add data > click on your notebooks > **FIA\_ZINDI\_KP\_V4, FIA\_ZINDI\_KP\_V5, FIA\_ZINDI\_KP\_V6, FIA\_ZINDI\_KP\_V7** will appear > select all of them. Now click on file (top left) > click on Import notebook > upload, Run, Save and commit **FIA\_ZINDI\_KP\_ENSEMBLE**

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# FIA\_ZINDI\_KP\_ENSEMBLE

Python · [FIA\\_ZINDI\\_KP\\_V4](#), [FIA\\_ZINDI\\_KP\\_V5](#), [FIA\\_ZINDI\\_KP\\_V6](#) +1

Notebook

Input

Output

Logs

Comments (0)

Settings

Run

86.3s

This notebook should take around 90 seconds.

11. The output of the **FIA\_ZINDI\_KP\_ENSEMBLE** notebook (ensemble\_all\_V\_ENSEMBLE.csv) is the final submission for the leaderboard.

Finally, thanks a lot for this competition and do let me know if you just need the committed version of all the above notebooks and I can share with the appropriate person.

**NOTE:** please **DONOT** run this on any other platform or environment as the version of

Scipy

Numpy

Pandas

Lightgbm

Catboost

Xgboost

Sklearn

wont match and the results wont be reproducible. Also there could be RAM OOM errors.

Following are the versions in the current kaggle environment:

```
import scipy
import numpy
import pandas
import lightgbm
import catboost
import xgboost
import sklearn
print(scipy.__version__)
print(numpy.__version__)
print(pandas.__version__)
print(lightgbm.__version__)
print(catboost.__version__)
print(xgboost.__version__)
print(sklearn.__version__)
```

```
/opt/conda/lib/python3.10/site
this version of SciPy (detecte
warnings.warn(f"A NumPy vers
```

```
1.7.3
1.23.5
1.5.3
3.3.2
1.2
1.7.6
1.2.2
```

The above code is also present in all modelling notebooks.

THANKS  
Krishna Priya