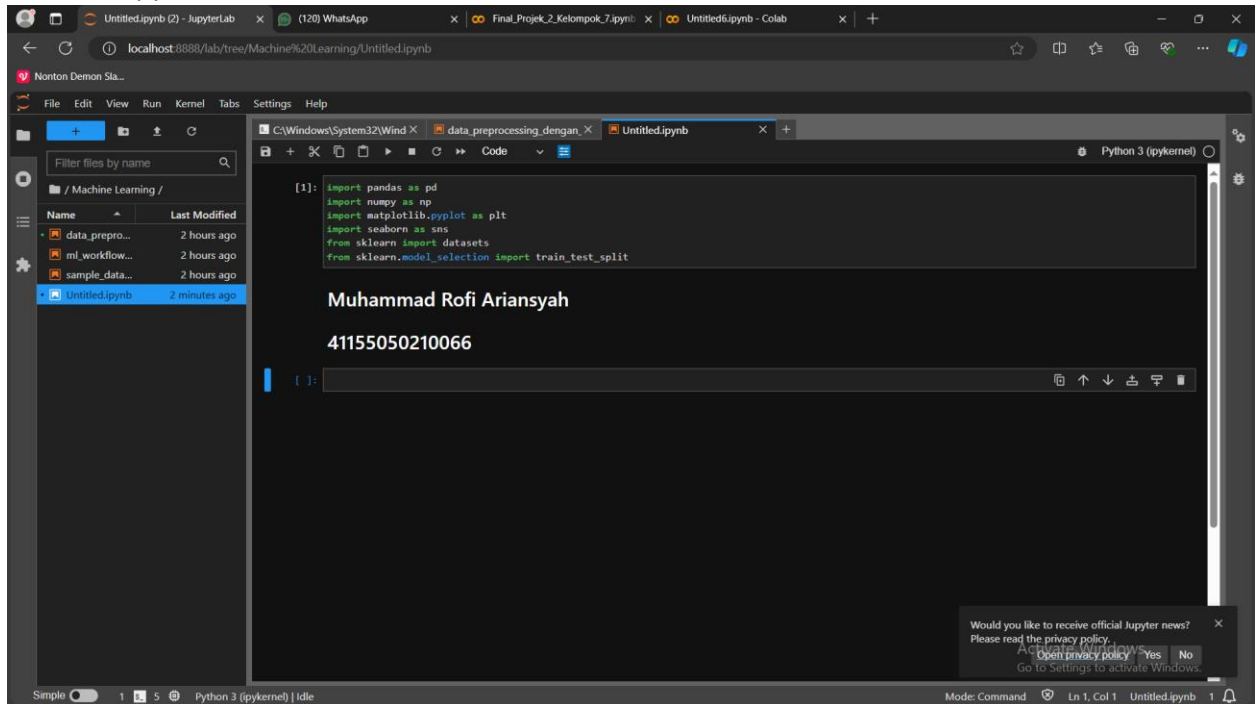


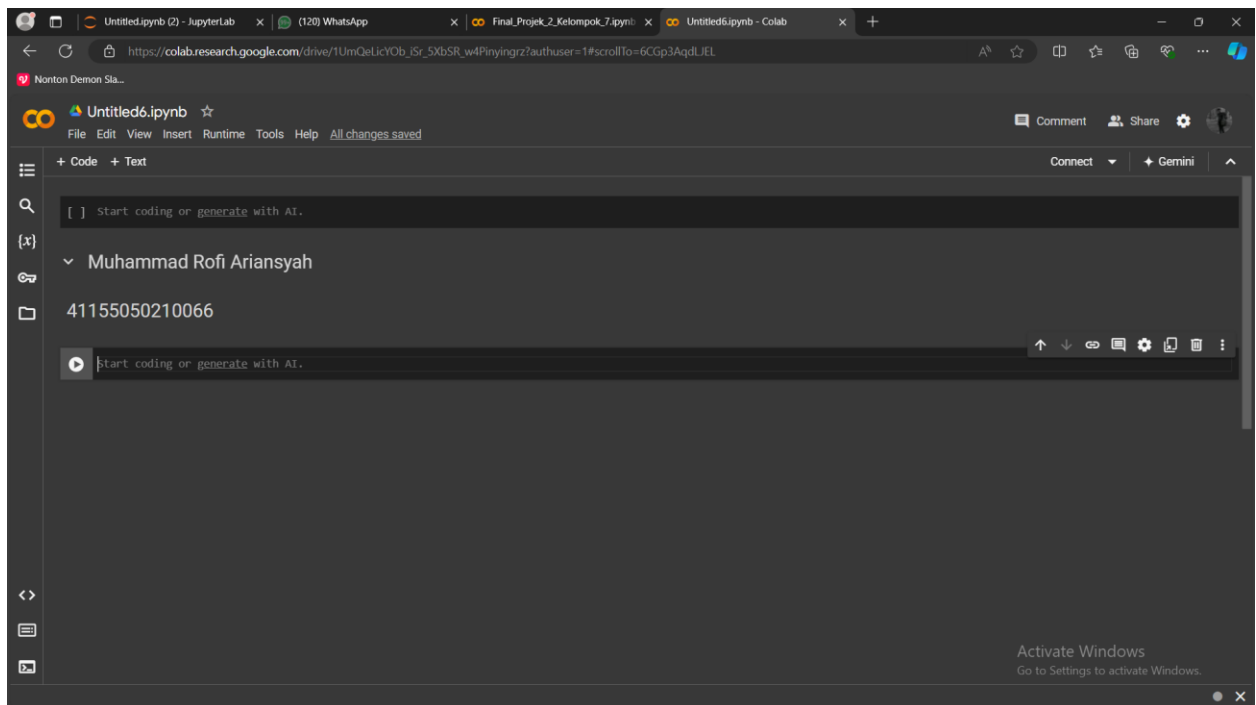
Nama : Muhammad Rofi Ariansyah
NPM: 41155050210066

PENDAHULUAN MACHINE LEARNING

1. Instalasi Jupyter Notebook



2. Colab



3. Akun kaggle

The screenshot shows the Kaggle homepage for a user named 'rofiariansyah'. The interface includes a sidebar with navigation links like Home, Competitions, Datasets, Models, Code, Discussions, Learn, and More. The main content area features a welcome message, a progress bar showing 25% completion towards the Contributor tier, and statistics for Datasets (0 total created), Notebooks (0 total created), Competitions (0 total joined), Discussions (0 total posted), and Courses (0 total completed). Below this, there are sections for 'Next Steps' and 'Things to do', including 'Run your first notebook' and 'Join a conversation'. The bottom of the page has a footer with a copyright notice for 2022.

4. Akun github

The screenshot shows the GitHub dashboard for a user named 'rofiariansyah'. The interface includes a sidebar with navigation links like Dashboard, Repositories, and Settings. The main content area features a 'Home' section with trending repositories, including 'bol-van/zapret' and 'hcengineering/platform'. There is also a 'UNIVERSE'24' banner for GitHub's 10th anniversary and a 'Latest changes' section with updates from 8 hours ago to yesterday. The bottom of the page has a footer with a copyright notice for 2022.

5. Praktikum Sample dataset

The image displays two screenshots of a JupyterLab environment, showing the process of loading and inspecting the Iris dataset using the sklearn library.

Top Screenshot: The notebook is titled "sample_dataset_pada sklearn.ipynb". The code cell shows the following:

```
Sample Dataset pada Scikit Learn

Load Dataset

[2]: from sklearn.datasets import load_iris

iris = load_iris()

iris
```

The output of the code cell is a list of 150 data points, each represented as a list of five values: sepal length, sepal width, petal length, petal width, and class. The first few rows of the output are:

```
[5.1, 3.5, 1.4, 0.2],
[4.9, 3. , 1.4, 0.2],
[4.7, 3.2, 1.3, 0.2],
[4.6, 3.1, 1.5, 0.2],
[5. , 3.6, 1.4, 0.2],
[5.4, 3.9, 1.7, 0.4],
[4.6, 3.4, 1.4, 0.3],
[5. , 3.4, 1.5, 0.2],
[4.4, 2.9, 1.4, 0.2],
[4.9, 3.1, 1.5, 0.1],
[5.4, 3.7, 1.5, 0.2],
[4.8, 3.4, 1.6, 0.2],
[4.8, 3. , 1.4, 0.1],
[4.9, 3. , 1.1, 0.1],
[5.8, 4. , 1.2, 0.2],
[5.7, 4.4, 1.5, 0.4],
[5.4, 3.9, 1.3, 0.4],
[5.1, 3.5, 1.4, 0.3],
[5.7, 3.8, 1.7, 0.3],
[5.1, 3.8, 1.5, 0.3],
[5.4, 3.4, 1.7, 0.2],
[5.1, 3.7, 1.5, 0.4],
[4.6, 3.6, 1. , 0.2],
[5.1, 3.3, 1.7, 0.5],
[4.8, 3.4, 1.9, 0.2],
[5. , 3. , 1.6, 0.2],
[5. , 3.4, 1.6, 0.4],
```

Bottom Screenshot: The notebook is titled "sample_dataset_pada sklearn.ipynb". The code cell shows the following:

```
30; also in "Contributions to\n Mathematical Statistics" (John Wiley, NY, 1950).\n - Duda, R.O., & Hart, P.E. (1973) Pattern Classification and\n Scene Analysis.\n (Q327.D83) John Wiley & Sons. ISBN 0-471-22361-1. See page 218.\n - Dasarthy, B.V. (1988) "Mosing Around the Neighborhood: A\n New System\n Structure and Classification Rule for Recognition in Partially Exposed\n Environments". IEEE Transactions on Pattern Analysis and\n Machine\n Intelligence, Vol. PAMI-2, No. 1, 67-71.\n - Gates, G.W. (1972) "The Reduced Nearest Neighbor Rule". IEEE Transactions\n on Informa\n tion Theory, May 1972, 431-433.\n - See also: 1988 MLC Proceedings, 54-64. Cheeseman et al's AUTOCLASS II\n conceptual clustering system finds 3\n classes in the data.\n - Many, many more ...",
'feature_names': ['sepal length (cm)',
'sepal width (cm)',
'petal length (cm)',
'petal width (cm)',
'filename': 'iris.csv',
'data_module': 'sklearn.datasets.data']

[3]: iris.keys()

[3]: dict_keys(['data', 'target', 'frame', 'target_names', 'DESCR', 'feature_names', 'filename', 'data_module'])

[4]: print(iris.DESCR)

.. _iris_dataset:

Iris plants dataset
-----

**Data Set Characteristics:**

: Number of Instances: 150 (50 in each of three classes)
: Number of Attributes: 4 numeric, predictive attributes and the class
: Attribute Information:
- sepal length in cm
- sepal width in cm
- petal length in cm
- petal width in cm
- class:
- Iris-Setosa
- Iris-Versicolour
- Iris-Virginica
```

The output of the code cell is a detailed description of the Iris dataset, including the number of instances, attributes, and a list of the three classes: Iris-Setosa, Iris-Versicolour, and Iris-Virginica.

sample_data... (3) - JupyterLab x (120) WhatsApp x Final_Projek_2_Kelompok_7.ipynb x Untitled6.ipynb - Colab x | +

localhost:8888/lab/tree/Machine%20Learning/sample_dataset_pada_sklearn.ipynb

Norton Demon Sta...

File Edit View Run Kernel Tabs Settings Help

Filter files by name

/ Machine Learning /

Name	Last Modified
data_prepro...	2 hours ago
ml_workflow...	2 hours ago
sample_data...	2 hours ago
Untitled.ipynb	6 minutes ago

```
[8]: # Explanatory variables (Features)
X = iris.data
X.shape
# X
[8]: (150, 4)

[9]: # Response Variable (Target)
y = iris.target
y.shape
# y
[9]: (150,)
```

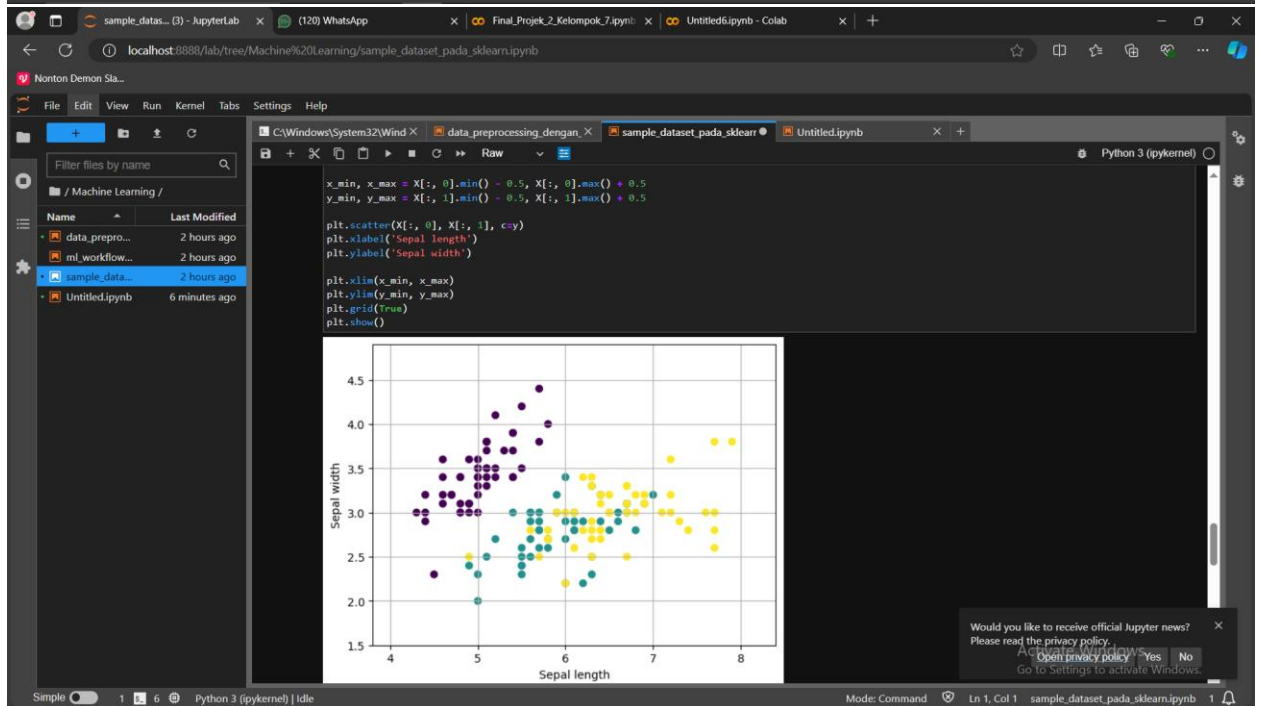
```
[10]: # features names
feature_names = iris.feature_names
feature_names
[10]: ['sepal length (cm)',
'sepal width (cm)',
'petal length (cm)',
'petal width (cm)']

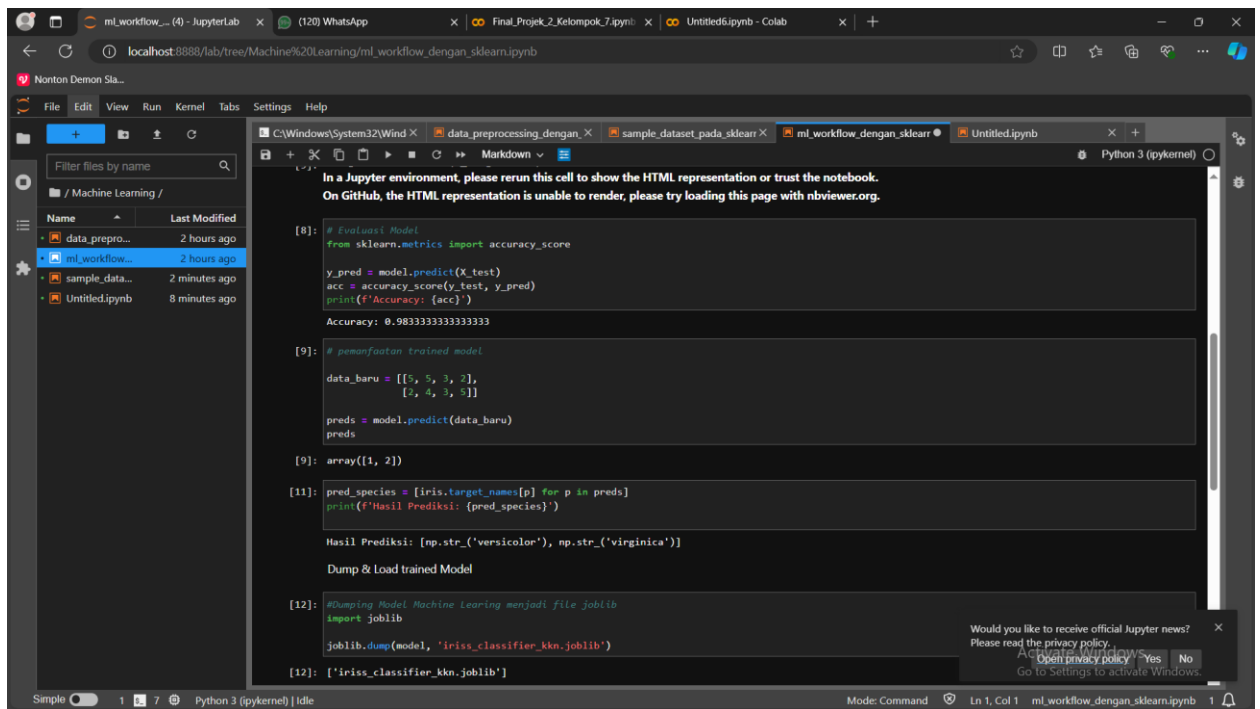
[11]: # target names
target_names = iris.target_names
target_names
[11]: array(['setosa', 'versicolor', 'virginica'], dtype='<U10')

[12]: # visualisasi data sepal length & width
import matplotlib.pyplot as plt
X = X[:, :2]
x_min, x_max = X[:, 0].min() - 0.5, X[:, 0].max() + 0.5
```

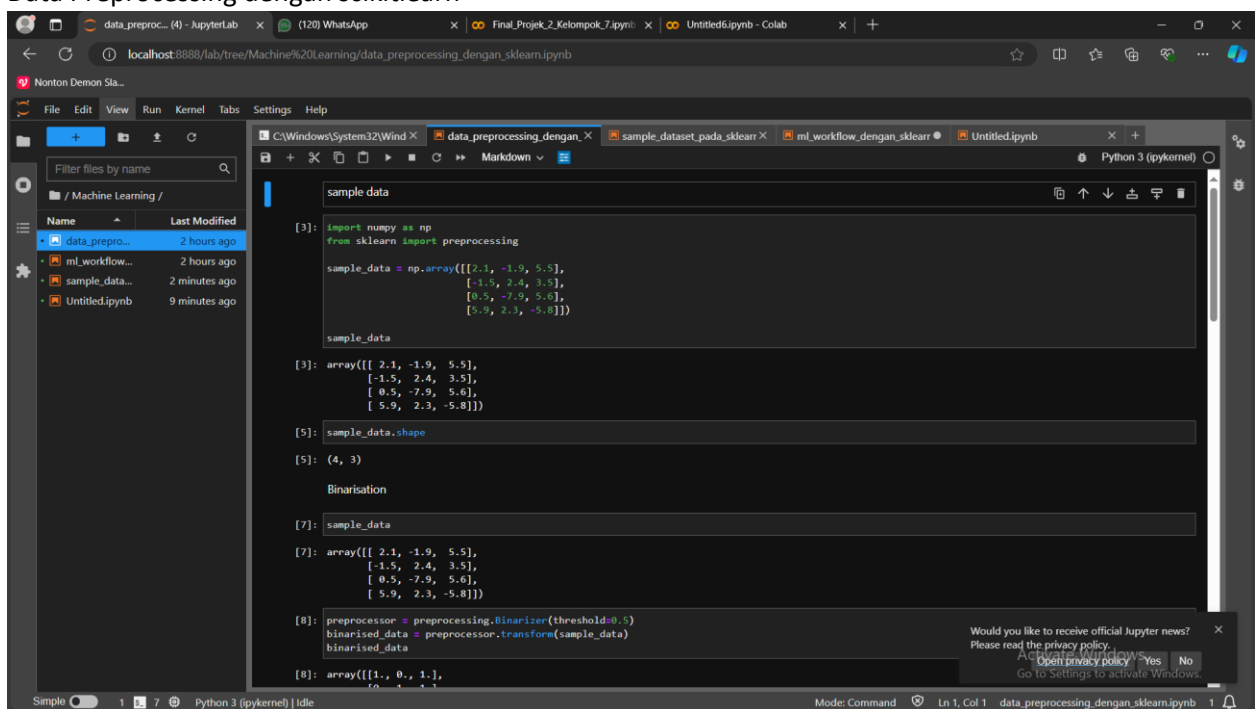
Would you like to receive official Jupyter news?
Please read the privacy policy.
[Open privacy policy](#) Yes No

Simple 1 6 Python 3 (pykernel) | Idle Mode: Command Ln 1, Col 1 sample_dataset_pada_sklearn.ipynb 1





7. Data Preprocessing dengan sciklearn



data_preproc... (4) - JupyterLab x (120) WhatsApp x Final_Projek_2_Kelompok_7.ipynb x Untitled6.ipynb - Colab x | +

localhost:8888/lab/tree/Machine%20Learning/data_preprocessing_dengan_sklearn.ipynb

Norton Demon Sta...

File Edit View Run Kernel Tabs Settings Help

Filter files by name

/ Machine Learning /

Name	Last Modified
data_preproc...	2 hours ago
ml_workflow...	2 hours ago
sample_data...	2 minutes ago
Untitled.ipynb	9 minutes ago

scaling

```
[9]: sample_data
[9]: array([[ 2.1, -1.9,  5.5],
          [-1.5,  2.4,  3.5],
          [ 0.5, -7.9,  5.6],
          [ 5.9,  2.3, -5.8]])

[11]: preprocessor = preprocessing.MinMaxScaler(feature_range=(0, 1))
      preprocessor.fit(sample_data)
      scaled_data = preprocessor.transform(sample_data)
      scaled_data

[11]: array([[0.48648649, 0.58252427, 0.99122807],
          [0.        ,  1.        ,  0.81578947],
          [0.27027027, 0.        ,  1.        ],
          [1.        ,  0.99029126, 0.        ]])

[13]: scaled_data = preprocessor.fit_transform(sample_data)
      scaled_data

[13]: array([[0.48648649, 0.58252427, 0.99122807],
          [0.        ,  1.        ,  0.81578947],
          [0.27027027, 0.        ,  1.        ],
          [1.        ,  0.99029126, 0.        ]])

L1 Normalisation: Least Absolute Deviations

[14]: sample_data
[14]: array([[ 2.1, -1.9,  5.5],
          [-1.5,  2.4,  3.5],
          [ 0.5, -7.9,  5.6],
          [ 5.9,  2.3, -5.8]])

[15]: l1_normalised_data = preprocessing.normalize(sample_data, norm='l1')
      l1_normalised_data
```

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Simple 1 7 Python 3 (pykernel) | Idle Mode: Command Ln 1, Col 1 data_preprocessing_dengan_sklearn.ipynb 1

data_preproc... (4) - JupyterLab x (120) WhatsApp x Final_Projek_2_Kelompok_7.ipynb x Untitled6.ipynb - Colab x | +

localhost:8888/lab/tree/Machine%20Learning/data_preprocessing_dengan_sklearn.ipynb

Norton Demon Sta...

File Edit View Run Kernel Tabs Settings Help

Filter files by name

/ Machine Learning /

Name	Last Modified
data_preproc...	2 hours ago
ml_workflow...	2 hours ago
sample_data...	3 minutes ago
Untitled.ipynb	10 minutes ago

L1 Normalisation: Least Absolute Deviations

```
[14]: sample_data
[14]: array([[ 2.1, -1.9,  5.5],
          [-1.5,  2.4,  3.5],
          [ 0.5, -7.9,  5.6],
          [ 5.9,  2.3, -5.8]])

[15]: l1_normalised_data = preprocessing.normalize(sample_data, norm='l1')
      l1_normalised_data

[15]: array([[ 0.22105263, -0.2        ,  0.57894737],
          [-0.2027027,  0.32432432,  0.47297297],
          [ 0.03571429, -0.56428571,  0.4        ],
          [ 0.42142857,  0.16428571, -0.41428571]])

L2 Normalisation: Least Squares

[ ]: sample_data

[16]: l2_normalised_data = preprocessing.normalize(sample_data, norm='l2')
      l2_normalised_data

[16]: array([[ 0.33946114, -0.30713151,  0.88906489],
          [-0.33325106,  0.53320169,  0.775858    ],
          [ 0.05156558, -0.81473612,  0.57753446],
          [ 0.68706914,  0.26784051, -0.6754239    ]])

[ ]:
```

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Simple 1 7 Python 3 (pykernel) | Idle Mode: Command Ln 1, Col 1 data_preprocessing_dengan_sklearn.ipynb 1