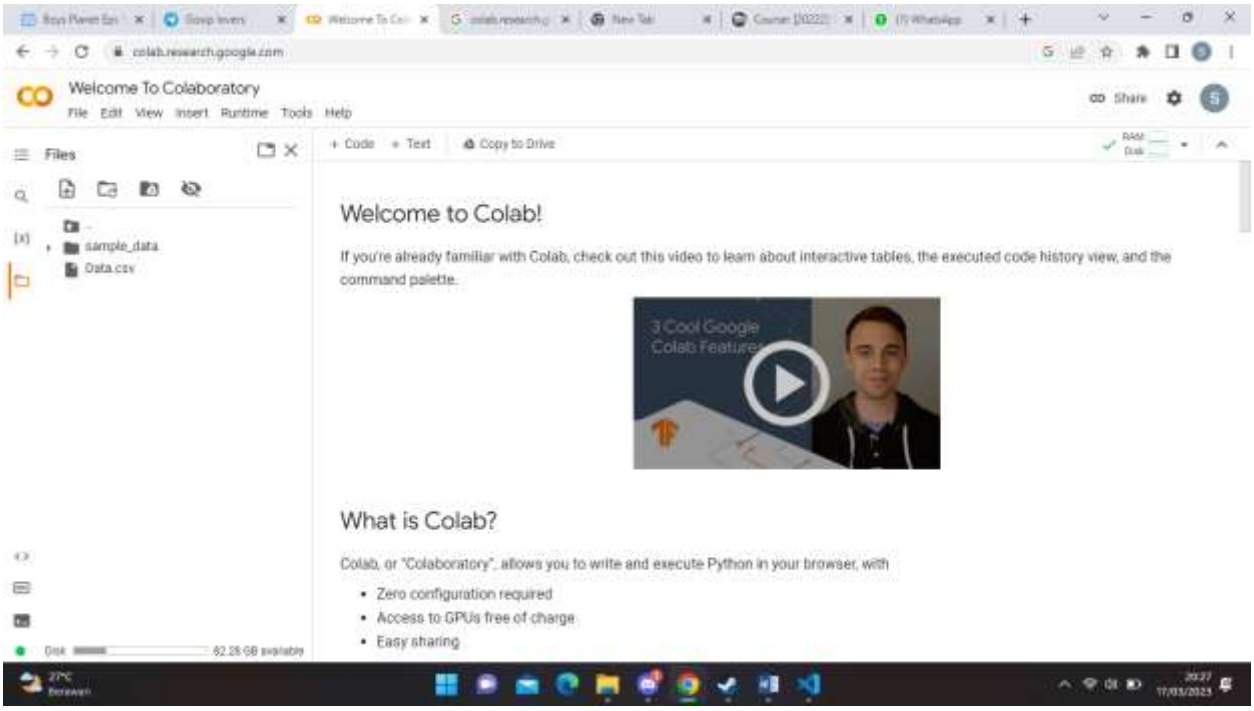
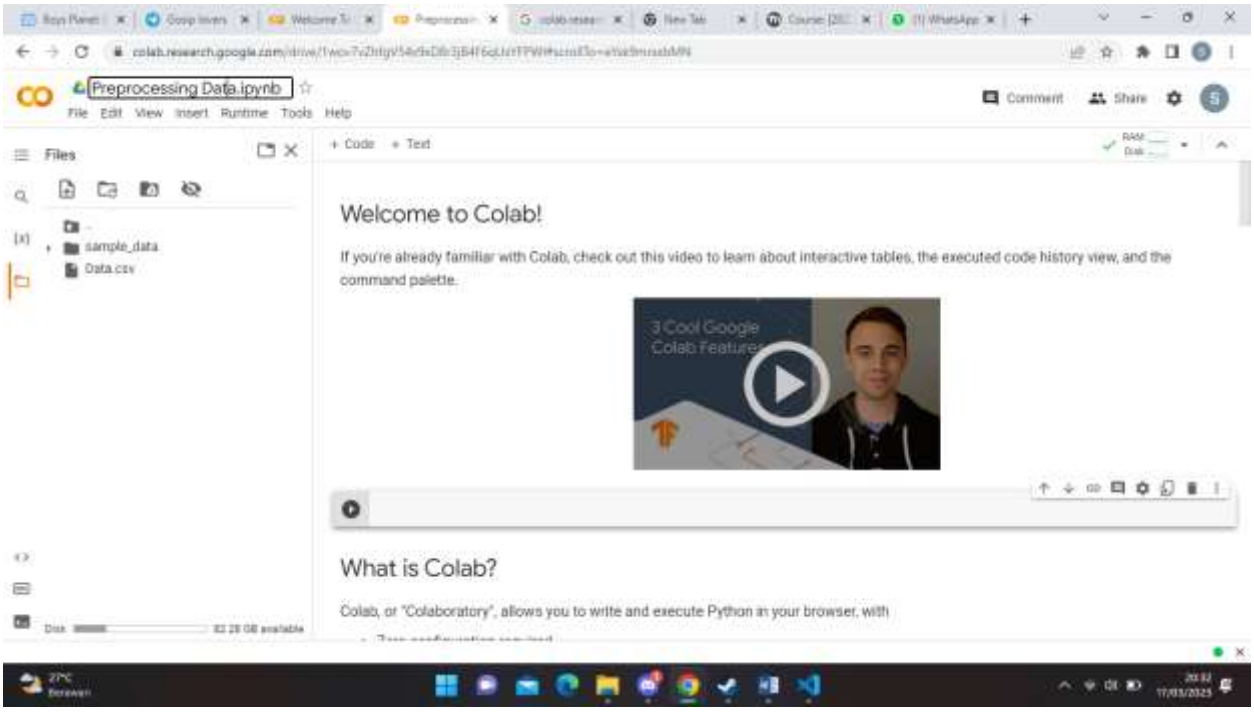
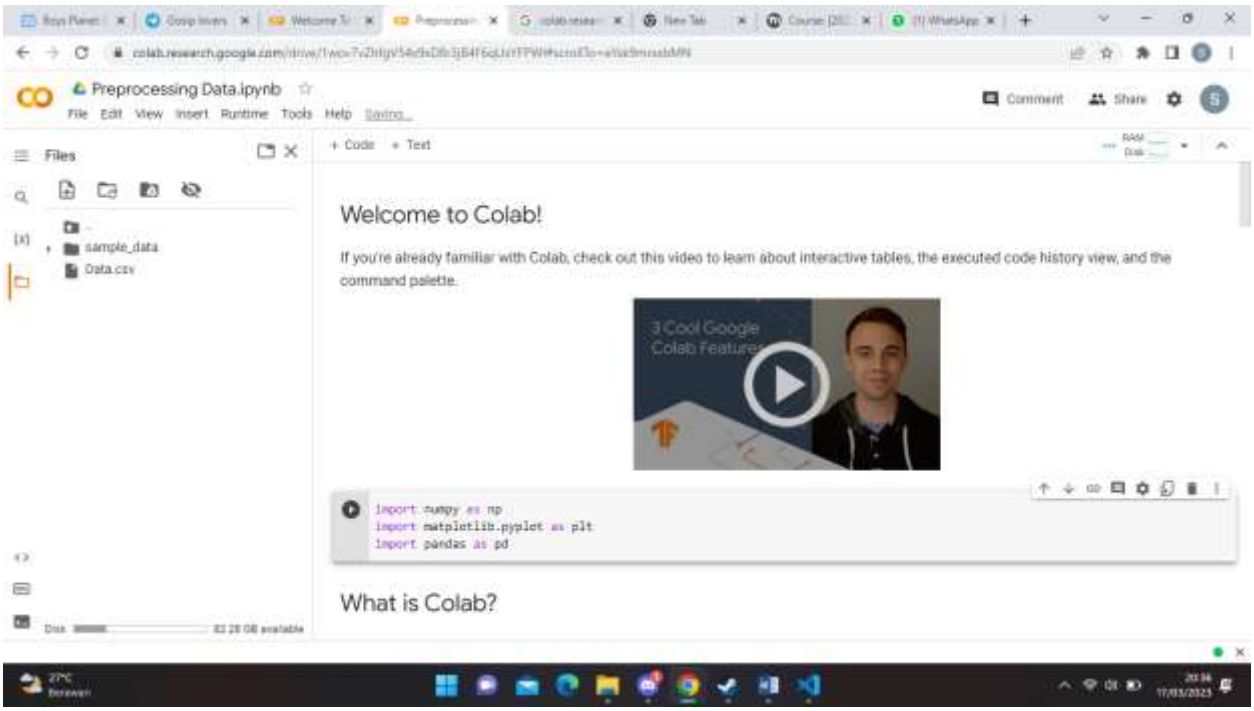
Nama : Shine Vardina Victoria Sudrajat

NIM : A11.2020.13189

Kelas : A11.4616






Preprocessing Data.ipynb
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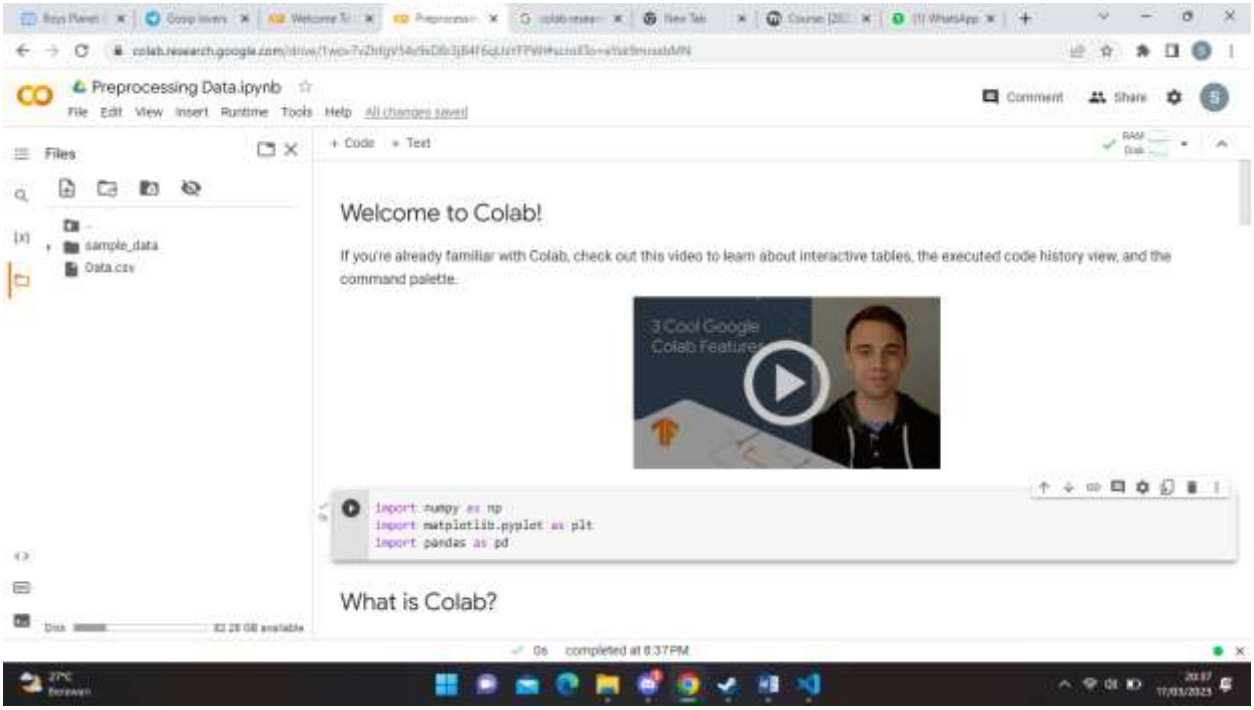
+ Text
Welcome to Colab!
If you're already familiar with Colab, check out this video to learn about interactive tables, the executed code history view, and the command palette.
3 Cool Google Colab Features
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
What is Colab?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What is Colab?
0s completed at 8:37PM

Preprocessing Data.ipynb

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sample_data

Data.csv

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```
[1] import numpy as np
    import matplotlib.pyplot as plt
    import pandas as pd
```

```
Numpy merupakan libraly python digunakan untuk komputasi
matriks.
Matplotlip merupakan libraly python untuk presentasi data
berupa grafik atau plot.
```

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Preprocessing Data.ipynb

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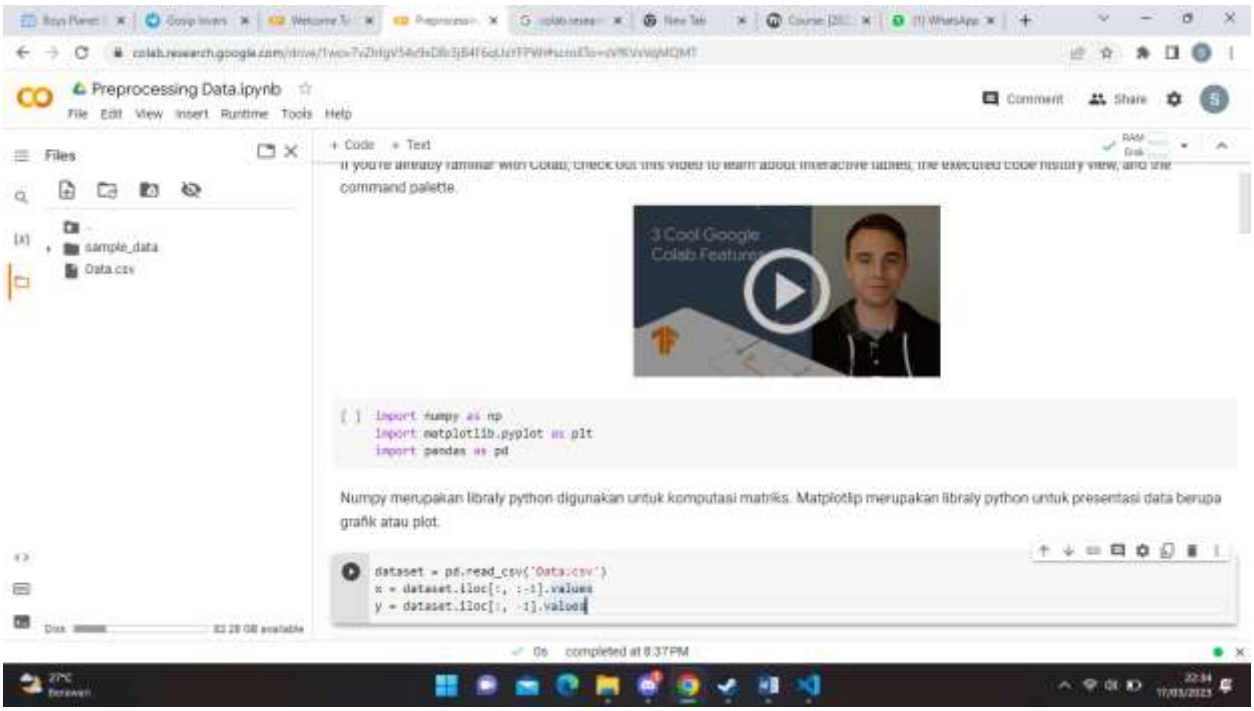
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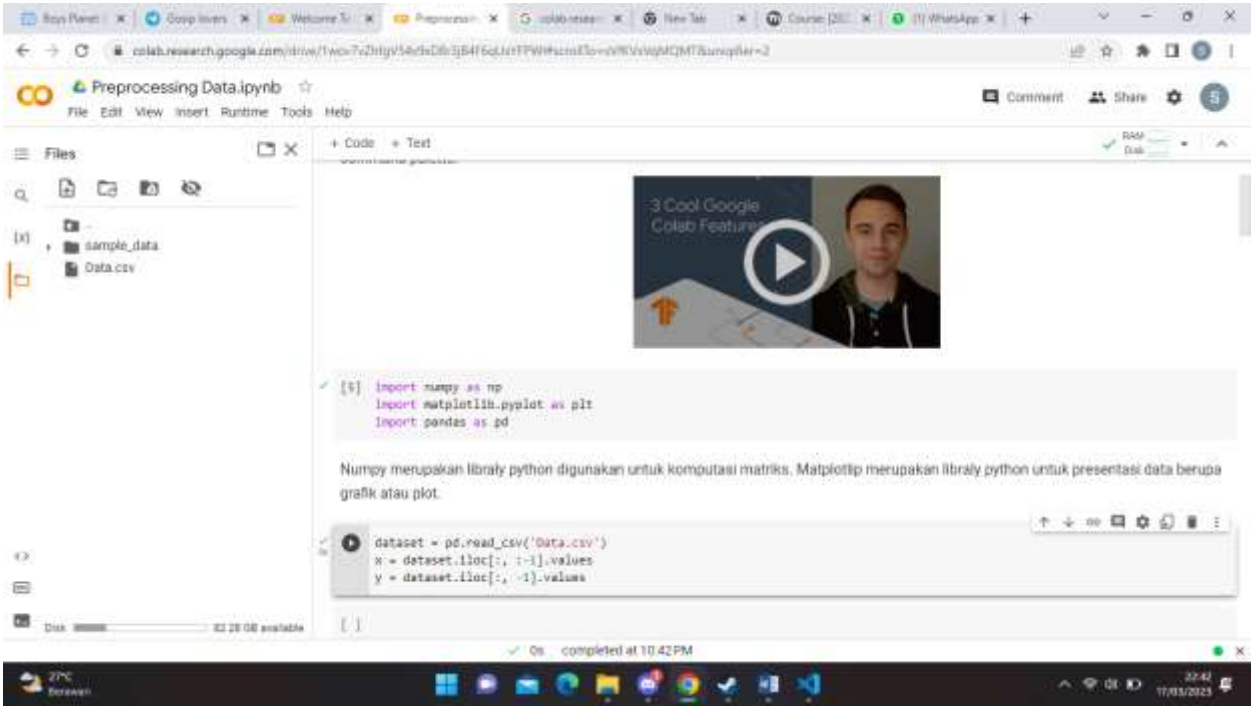
dataset = pd.read_csv('Data.csv')
x = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
0s completed at 8:37 PM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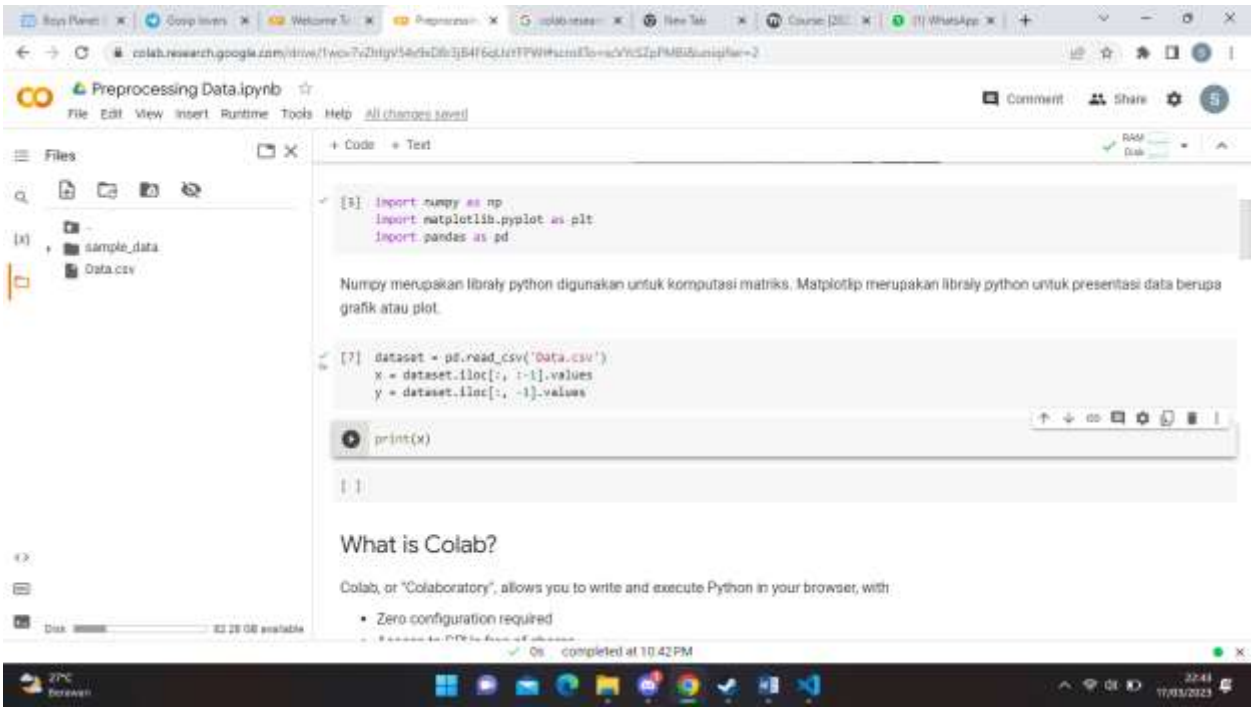
dataset = pd.read_csv('Data.csv')
x = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
0s completed at 10:42 PM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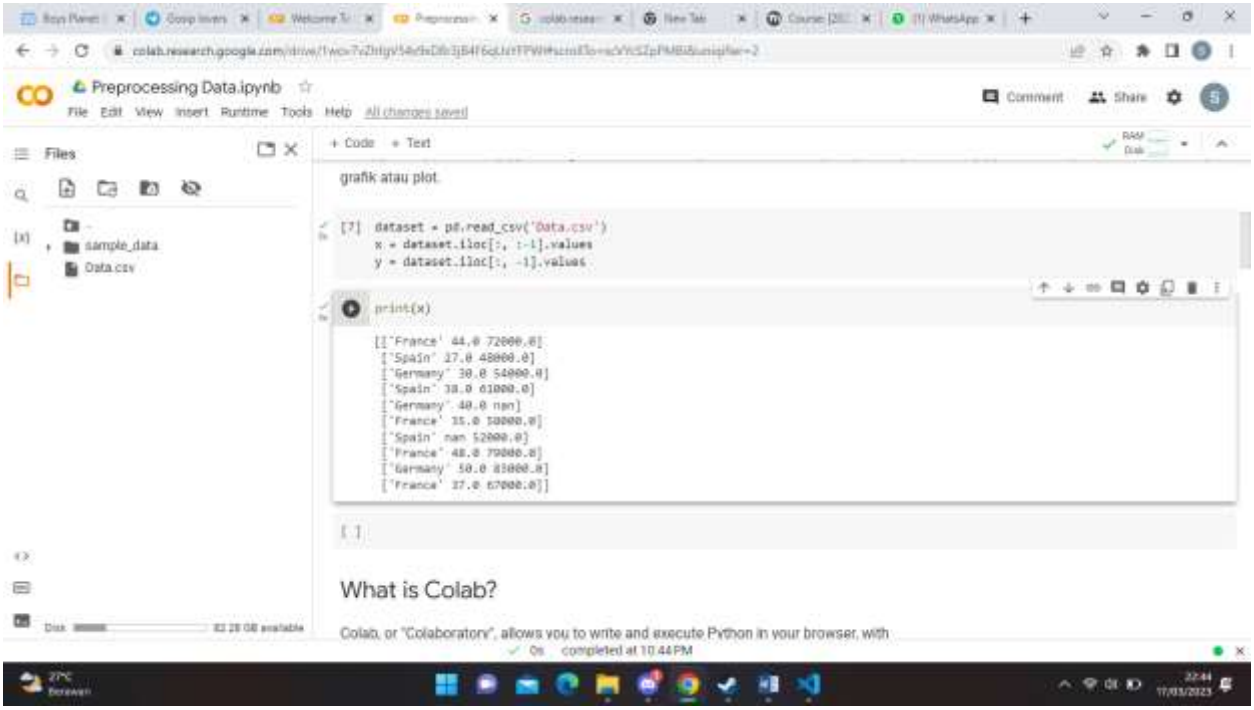
Data.csv
[3] import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
Numpy merupakan library python digunakan untuk komputasi matriks. Matplotlip merupakan library python untuk presentasi data berupa grafik atau plot.
[7] dataset = pd.read_csv('Data.csv')
x = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
print(x)
[ ]
What is Colab?
Colab, or "Colaboratory", allows you to write and execute Python in your browser, with
Zero configuration required
0s completed at 10:42 PM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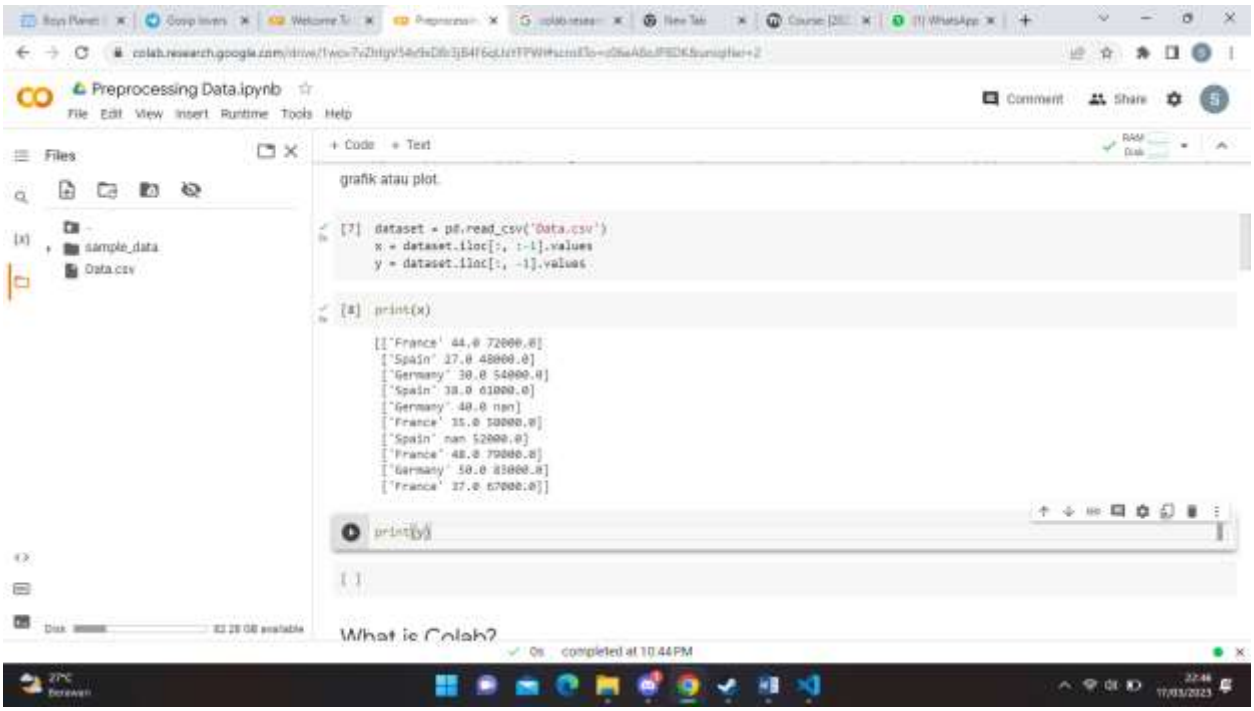
y = dataset.iloc[:, -1].values
print(x)
[['France' 44.0 72000.0]
['Spain' 27.0 48000.0]
['Germany' 30.0 54000.0]
['Spain' 38.0 61000.0]
['Germany' 40.0 nan]
['France' 35.0 58000.0]
['Spain' nan 52000.0]
['France' 48.0 79000.0]
['Germany' 50.0 83000.0]
['France' 37.0 67000.0]]
[ ]
What is Colab?
Colab, or "Colaboratory", allows you to write and execute Python in your browser, with
0s completed at 10:44 PM


Preprocessing Data.ipynb
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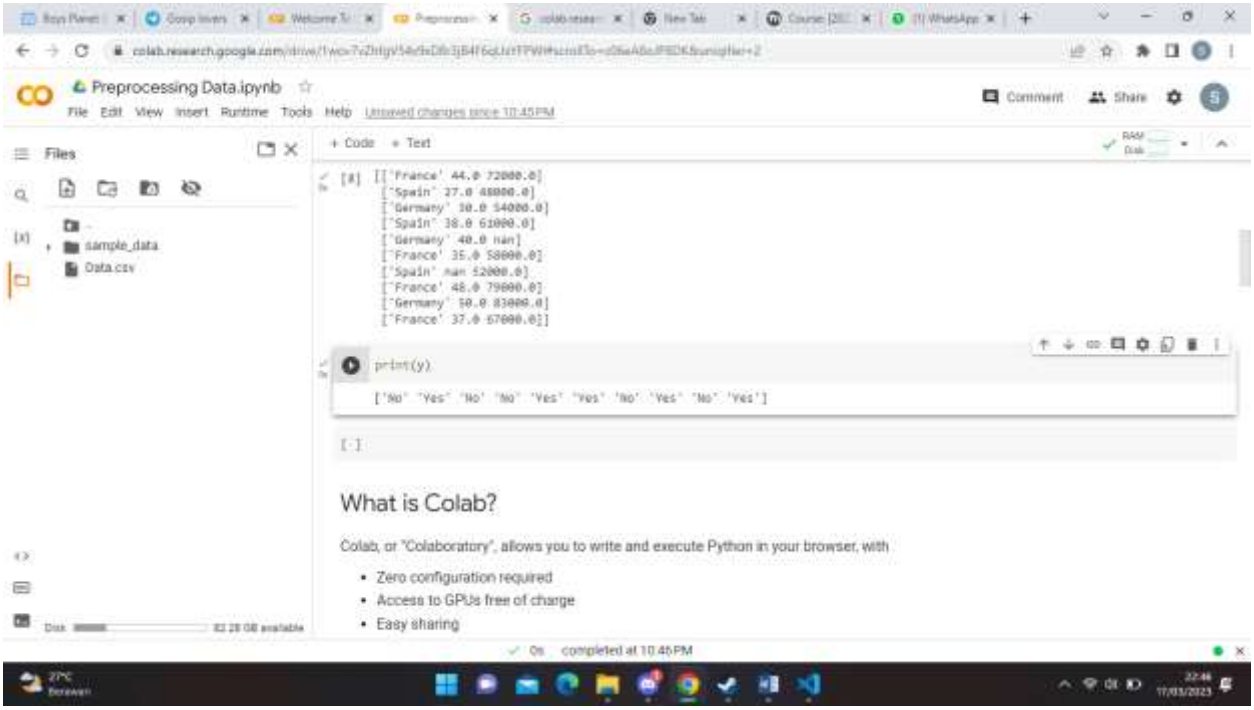
grafik atau plot.
[7] dataset = pd.read_csv('Data.csv')
x = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
[8] print(x)
[['France' 44.0 72000.0]
['Spain' 27.0 48000.0]
['Germany' 30.0 54000.0]
['Spain' 38.0 61000.0]
['Germany' 40.0 nan]
['France' 35.0 58000.0]
['Spain' nan 52000.0]
['France' 48.0 79000.0]
['Germany' 50.0 83000.0]
['France' 37.0 67000.0]]
print(y)
[ ]
What is Colab?
completed at 10:44 PM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Data.csv
[8] [['France' 44.0 72000.0]
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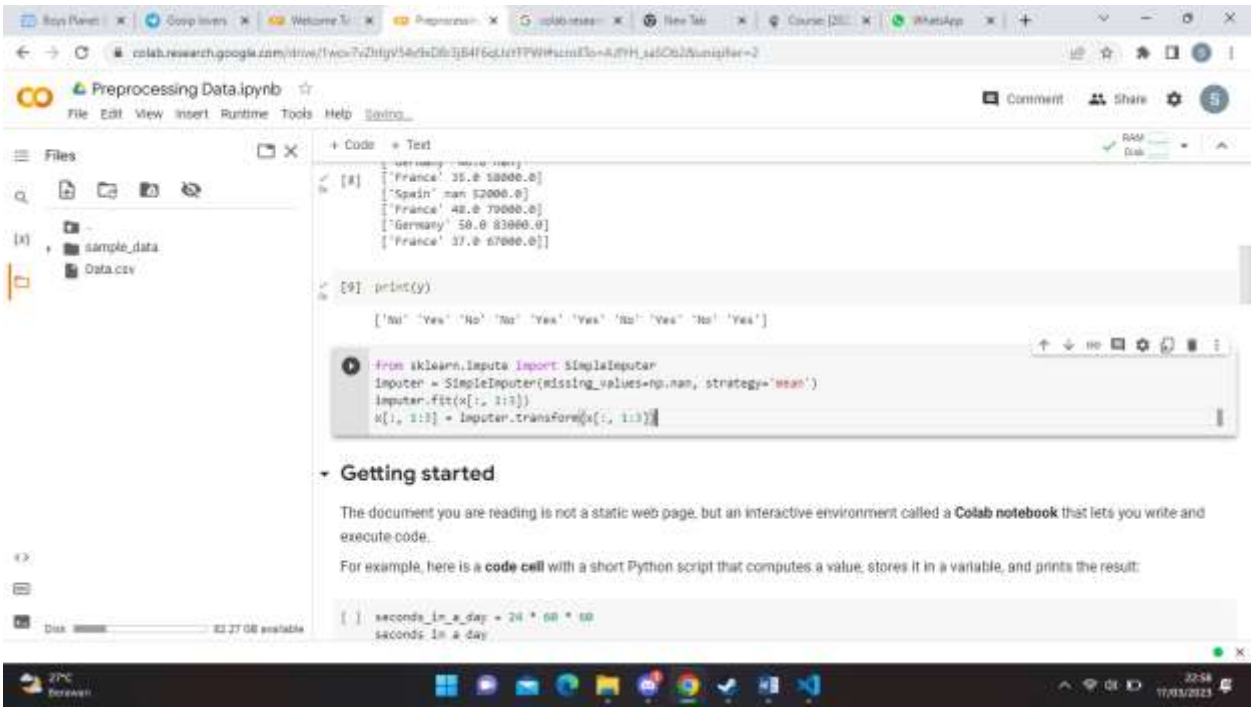
['Germany' 30.0 54000.0]
['Spain' 38.0 61000.0]
['Germany' 40.0 nan]
['France' 35.0 58000.0]
['Spain' nan 52000.0]
['France' 48.0 79000.0]
['Germany' 50.0 83000.0]
['France' 37.0 67000.0]]
print(y)
['No' 'Yes' 'No' 'No' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes']
[ ]
What is Colab?
Colab, or "Colaboratory", allows you to write and execute Python in your browser, with
Zero configuration required
Access to GPUs free of charge
Easy sharing
completed at 10:46 PM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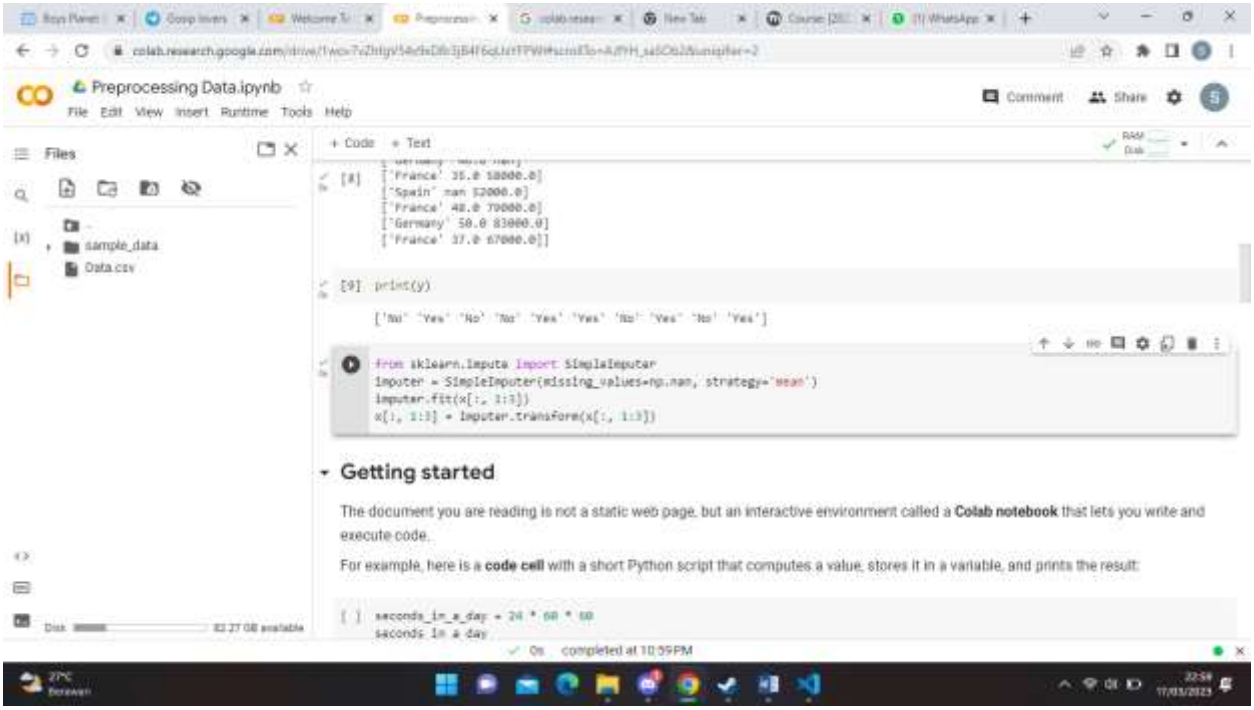
['France' 35.0 58000.0]
['Spain' nan 52000.0]
['France' 48.0 79000.0]
['Germany' 50.0 83000.0]
['France' 37.0 67000.0]]
print(y)
['No' 'Yes' 'No' 'No' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes']
from sklearn.impute import SimpleImputer
imputer = SimpleImputer(missing_values=np.nan, strategy='mean')
imputer.fit(x[:, 1:3])
x[:, 1:3] = imputer.transform(x[:, 1:3])
Getting started
The document you are reading is not a static web page, but an interactive environment called a Colab notebook that lets you write and execute code.
For example, here is a code cell with a short Python script that computes a value, stores it in a variable, and prints the result:
seconds_in_a_day = 24 * 60 * 60
seconds in a day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['France' 35.0 58000.0]
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print(y)
['No' 'Yes' 'No' 'No' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes']
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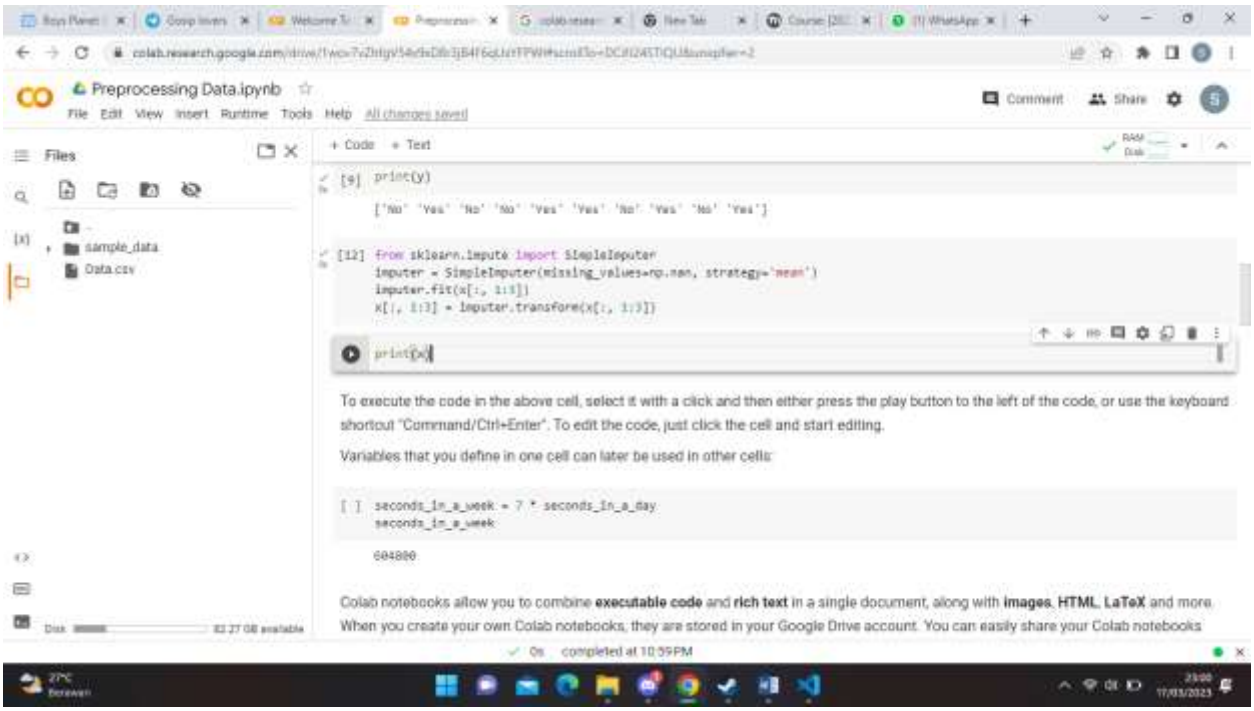
For example, here is a code cell with a short Python script that computes a value, stores it in a variable, and prints the result:
seconds_in_a_day = 24 * 60 * 60
seconds in a day
0s completed at 10:59PM


Preprocessing Data.ipynb
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sample_data
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[9] print(y)
['No' 'Yes' 'No' 'No' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes']
[12] from sklearn.impute import SimpleImputer
imputer = SimpleImputer(missing_values=np.nan, strategy='mean')
imputer.fit(x[:, 1:3])
x[:, 1:3] = imputer.transform(x[:, 1:3])
print(x)
To execute the code in the above cell, select it with a click and then either press the play button to the left of the code, or use the keyboard shortcut "Command/Ctrl+Enter". To edit the code, just click the cell and start editing.
Variables that you define in one cell can later be used in other cells:
[ ] seconds_in_a_week = 7 * seconds_in_a_day
seconds_in_a_week
604800
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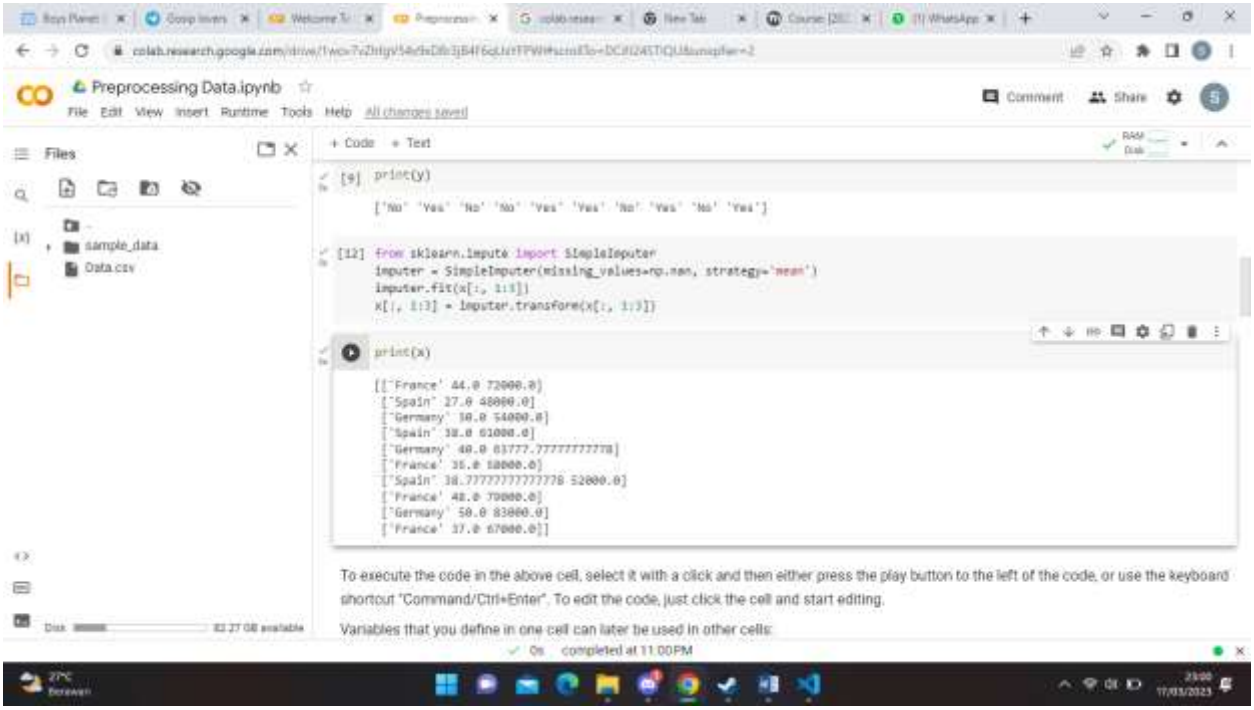
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[9] print(y)
['No' 'Yes' 'No' 'No' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes']
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['Spain' 38.0 61000.0]
['Germany' 40.0 63777.77777777778]
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['Germany' 50.0 83000.0]
['France' 37.0 67000.0]]
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Variables that you define in one cell can later be used in other cells:
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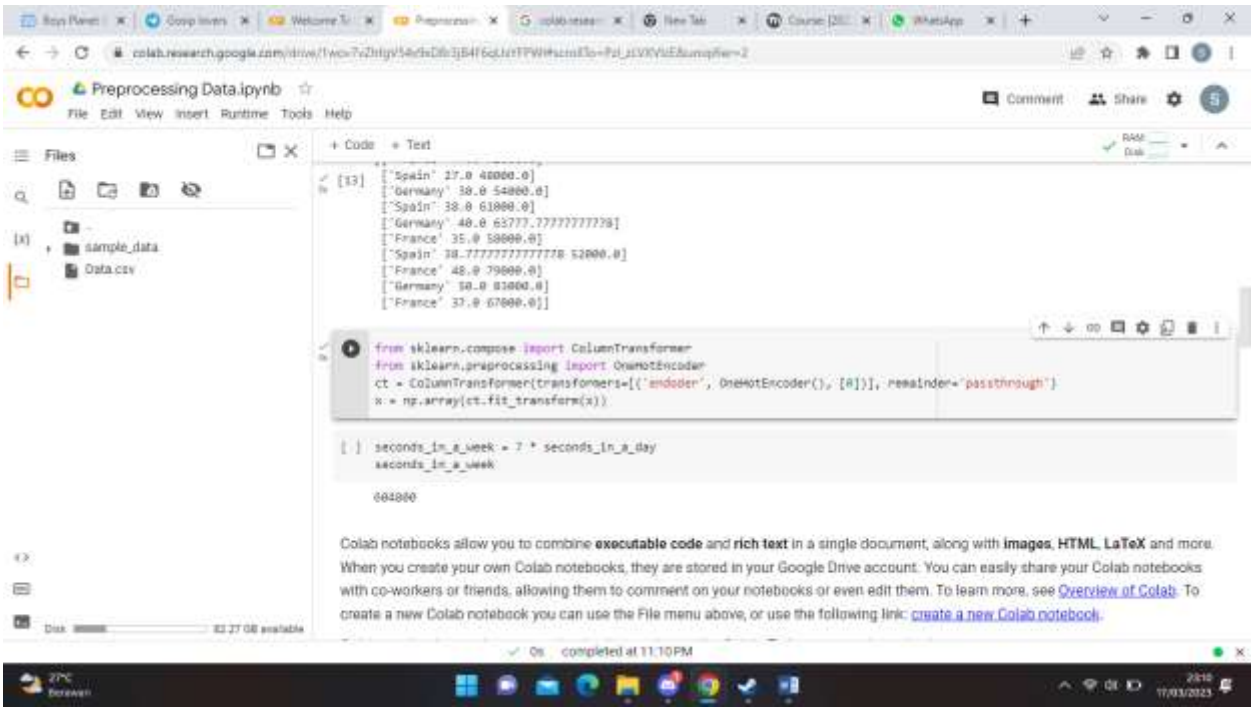
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['France' 37.0 67000.0]]
from sklearn.compose import ColumnTransformer
from sklearn.preprocessing import OneHotEncoder
ct = ColumnTransformer(transformers=[('endoder', OneHotEncoder(), [0])], remainder='passthrough')
x = np.array(ct.fit_transform(x))
seconds_in_a_week = 7 * seconds_in_a_day
seconds_in_a_week
604800
Colab notebooks allow you to combine executable code and rich text in a single document, along with images, HTML, LaTeX and more. When you create your own Colab notebooks, they are stored in your Google Drive account. You can easily share your Colab notebooks with co-workers or friends, allowing them to comment on your notebooks or even edit them. To learn more, see Overview of Colab. To create a new Colab notebook you can use the File menu above, or use the following link: create a new Colab notebook.
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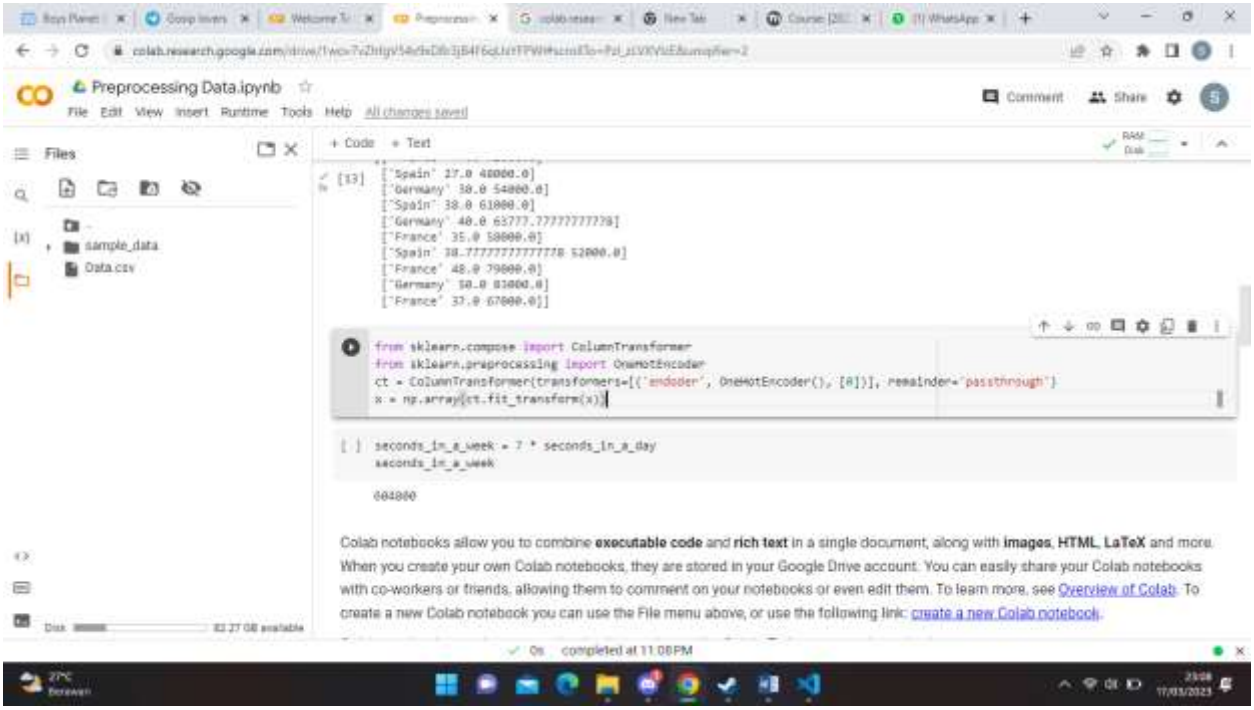
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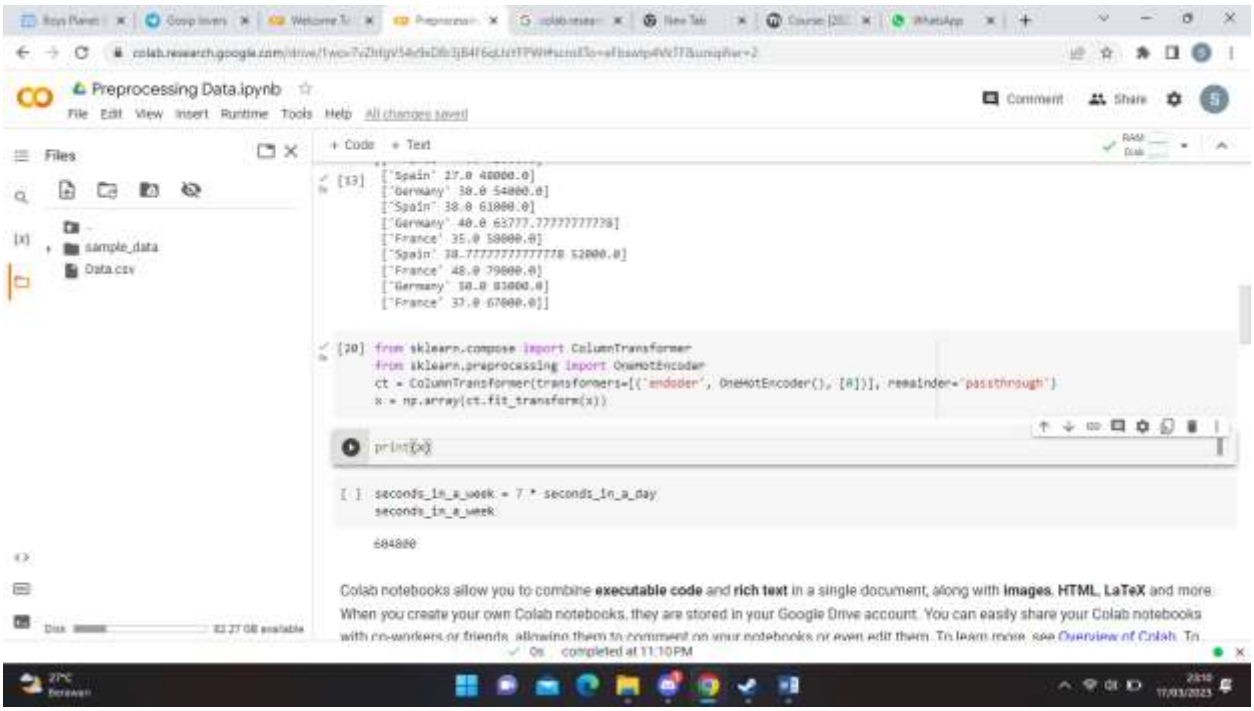
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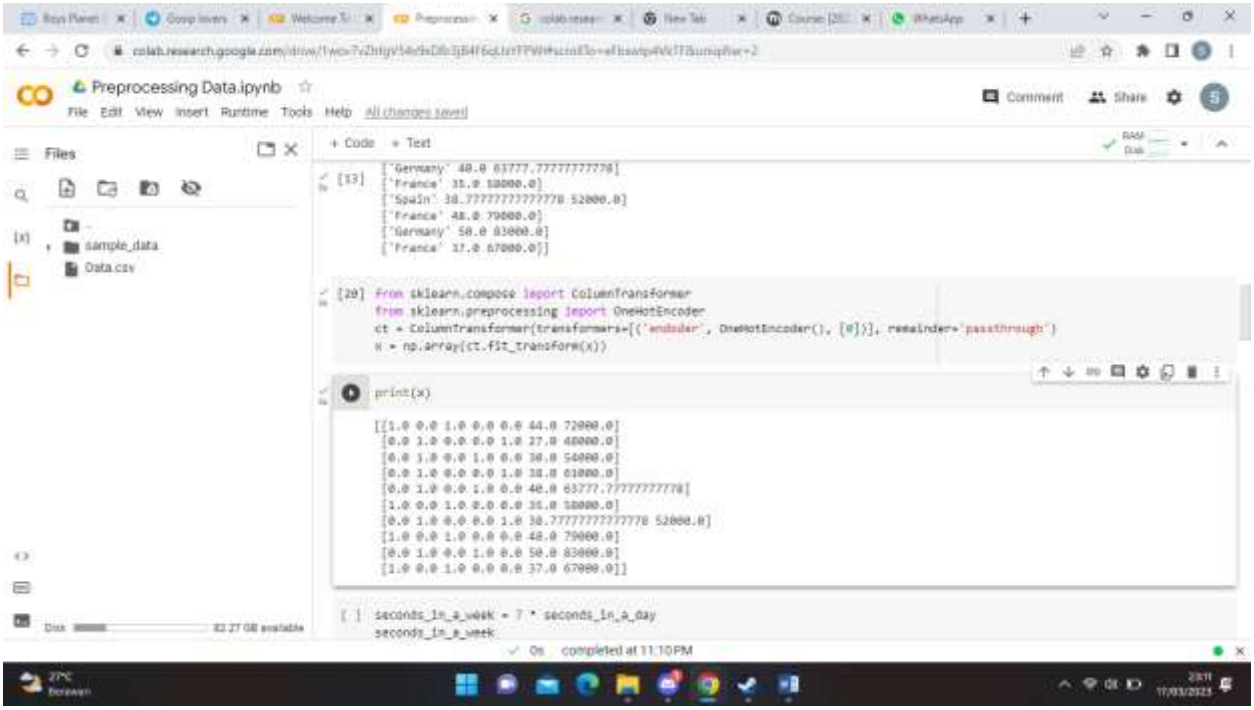
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[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
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[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
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[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
seconds_in_a_week = 7 * seconds_in_a_day
seconds_in_a_week
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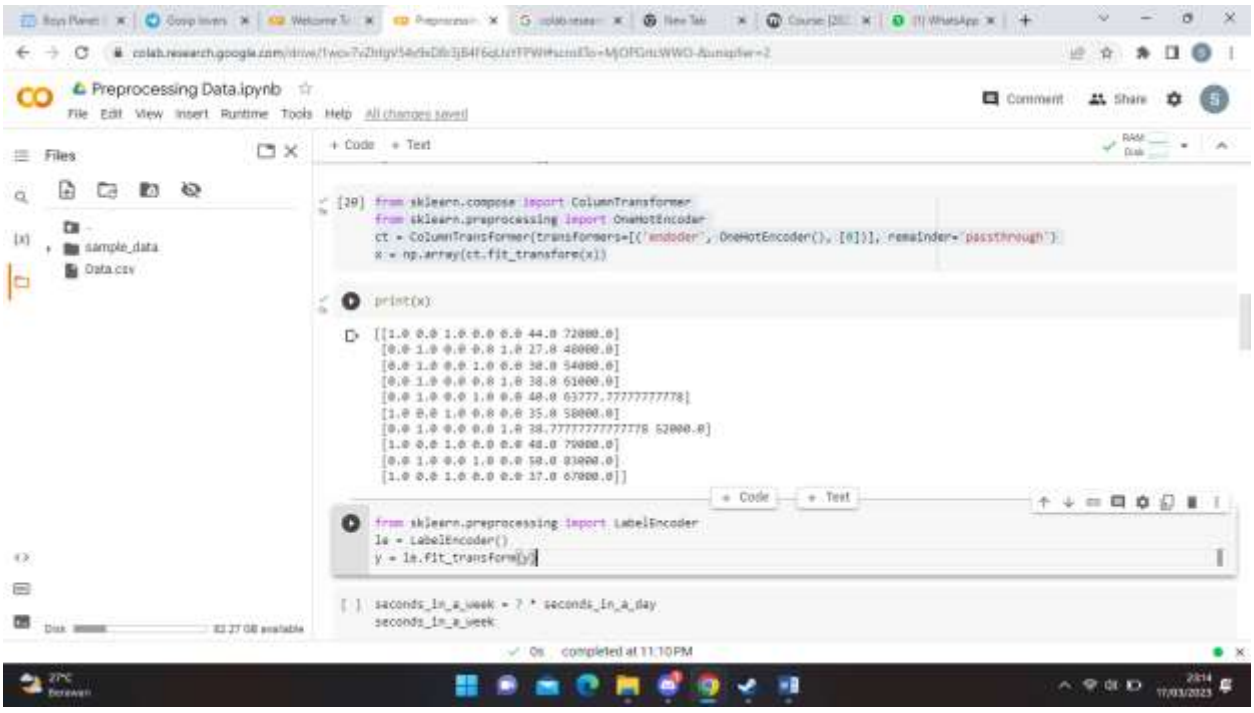
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[20] from sklearn.compose import ColumnTransformer
from sklearn.preprocessing import OneHotEncoder
ct = ColumnTransformer(transformers=[('encoder', OneHotEncoder(), [0])], remainder='passthrough')
x = np.array(ct.fit_transform(x))
print(x)
[[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.777777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
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from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
[ ] seconds_in_a_week = 7 * seconds_in_a_day
seconds_in_a_week
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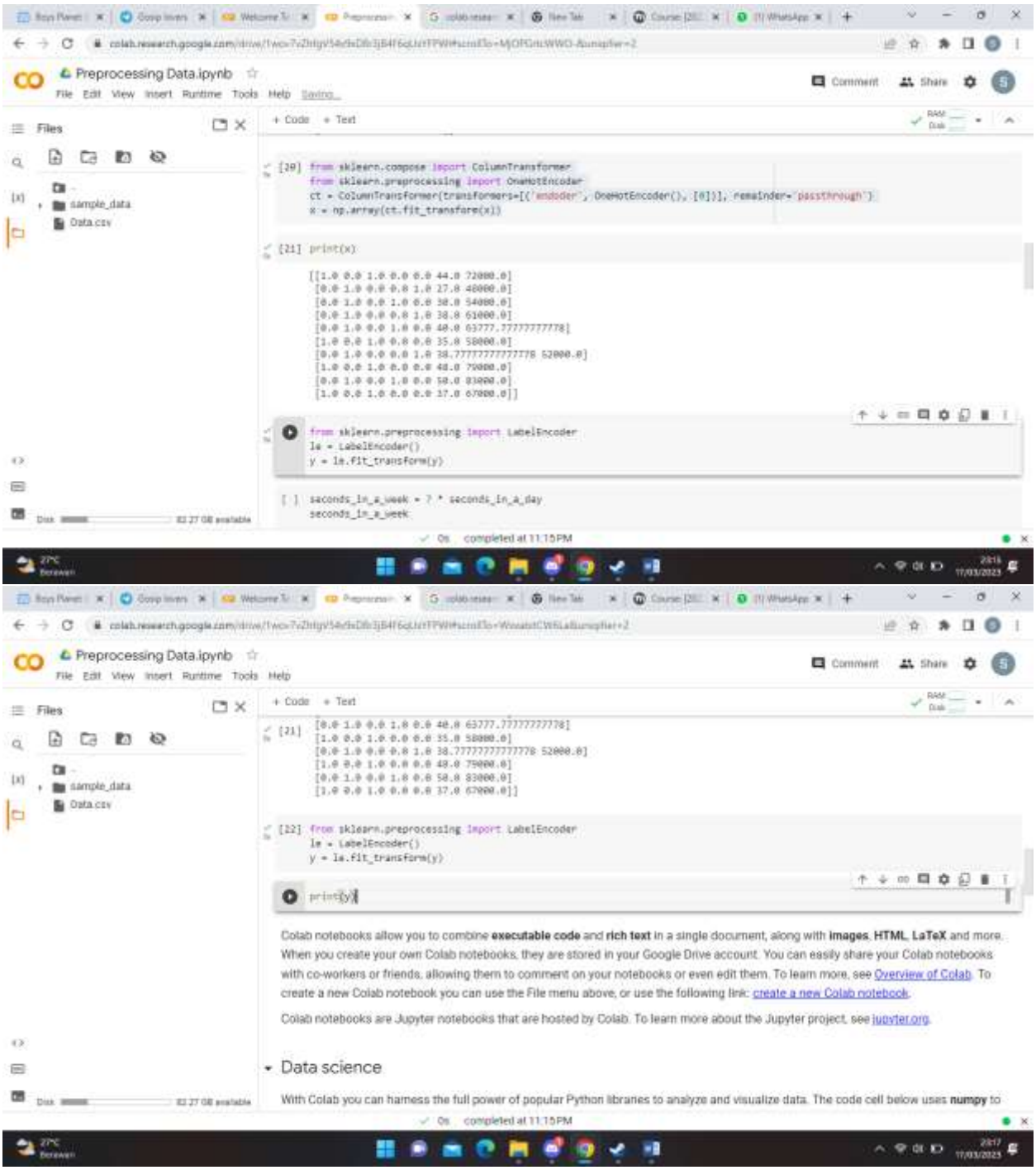
Preprocessing Data.ipynb
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sample_data
Data.csv
[20] from sklearn.compose import ColumnTransformer
from sklearn.preprocessing import OneHotEncoder
ct = ColumnTransformer(transformers=[('encoder', OneHotEncoder(), [0])], remainder='passthrough')
x = np.array(ct.fit_transform(x))
[21] print(x)
[[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.777777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
[ ] seconds_in_a_week = 7 * seconds_in_a_day
seconds_in_a_week
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Preprocessing Data.ipynb
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[21] [0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.777777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[22] from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
print(y)
Colab notebooks allow you to combine executable code and rich text in a single document, along with images, HTML, LaTeX and more. When you create your own Colab notebooks, they are stored in your Google Drive account. You can easily share your Colab notebooks with co-workers or friends, allowing them to comment on your notebooks or even edit them. To learn more, see Overview of Colab. To create a new Colab notebook you can use the File menu above, or use the following link: create a new Colab notebook.
Colab notebooks are Jupyter notebooks that are hosted by Colab. To learn more about the Jupyter project, see jupyter.org.
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to
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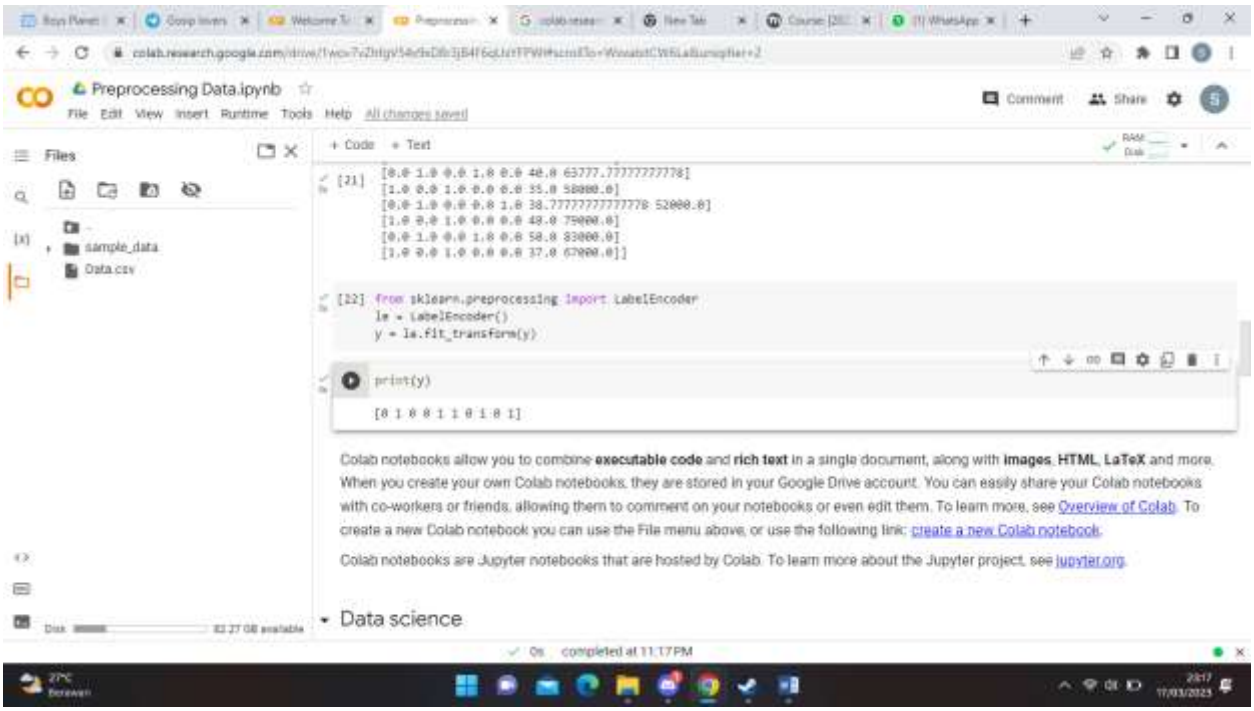
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[21] [0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[22] from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
print(y)
[0 1 0 0 1 1 0 1 0 1]
Colab notebooks allow you to combine executable code and rich text in a single document, along with images, HTML, LaTeX and more. When you create your own Colab notebooks, they are stored in your Google Drive account. You can easily share your Colab notebooks with co-workers or friends, allowing them to comment on your notebooks or even edit them. To learn more, see Overview of Colab. To create a new Colab notebook you can use the File menu above, or use the following link: create a new Colab notebook.
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Data science
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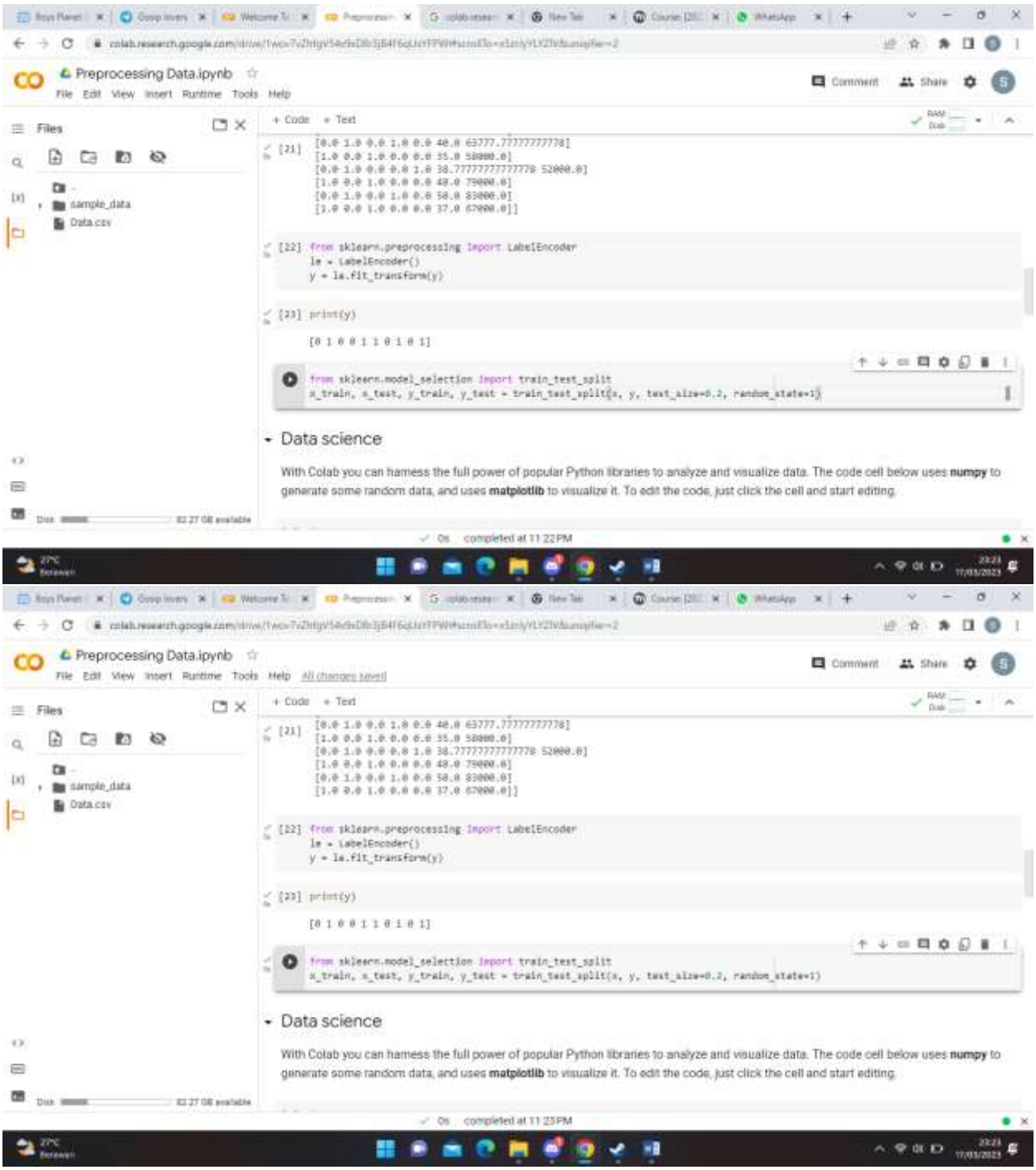
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[21] [0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[22] from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to generate some random data, and uses matplotlib to visualize it. To edit the code, just click the cell and start editing.
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[21] [0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[22] from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
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[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
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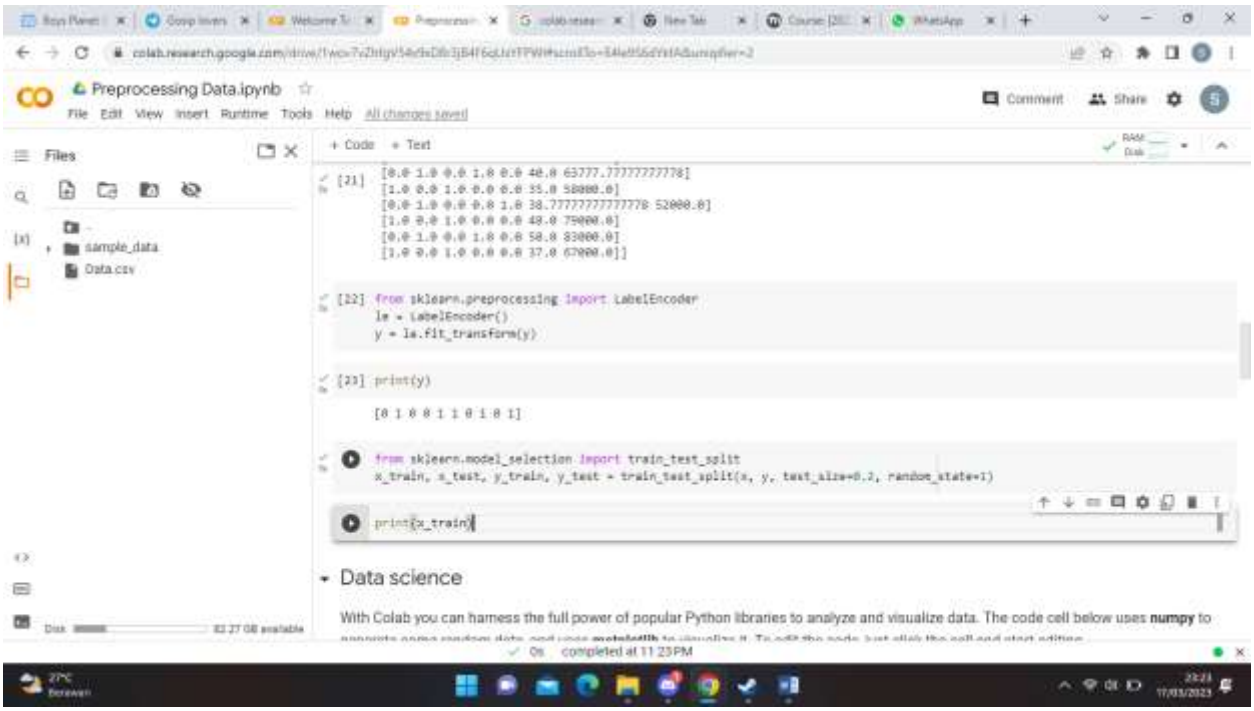
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[21] [0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]
[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[22] from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y = le.fit_transform(y)
[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
print(x_train)
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to
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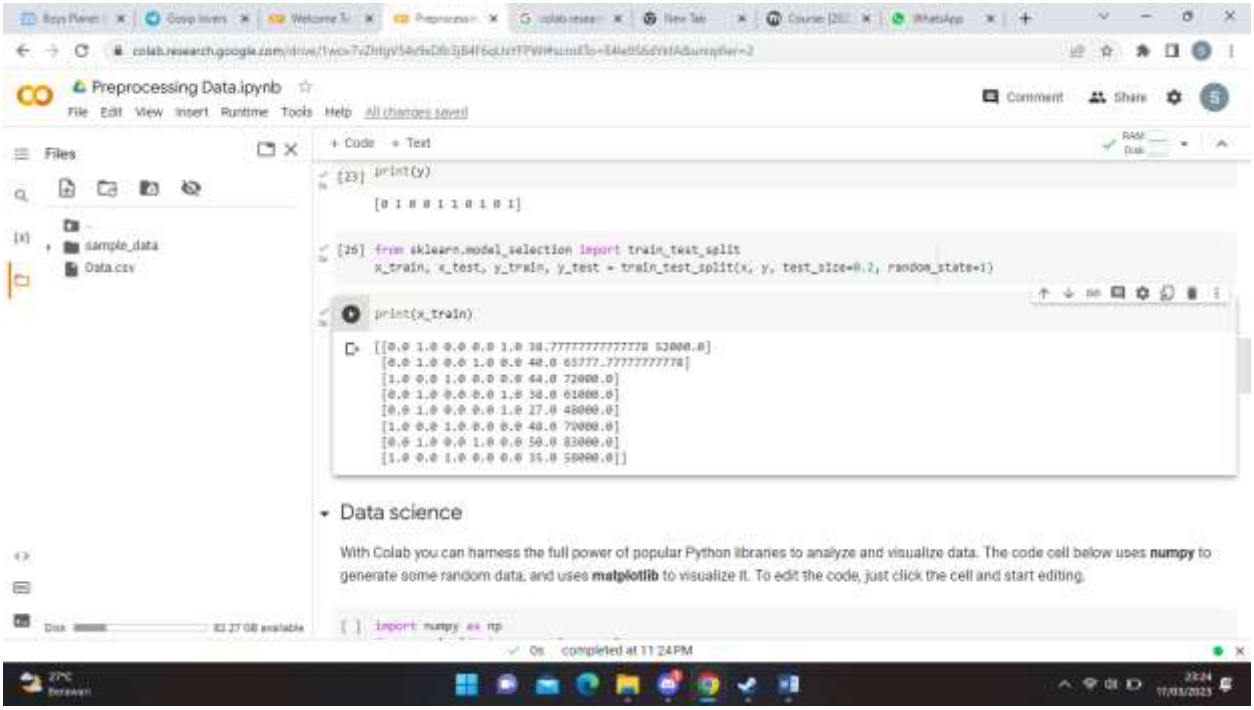
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[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
[26] from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to generate some random data, and uses matplotlib to visualize it. To edit the code, just click the cell and start editing.
[ ] import numpy as np
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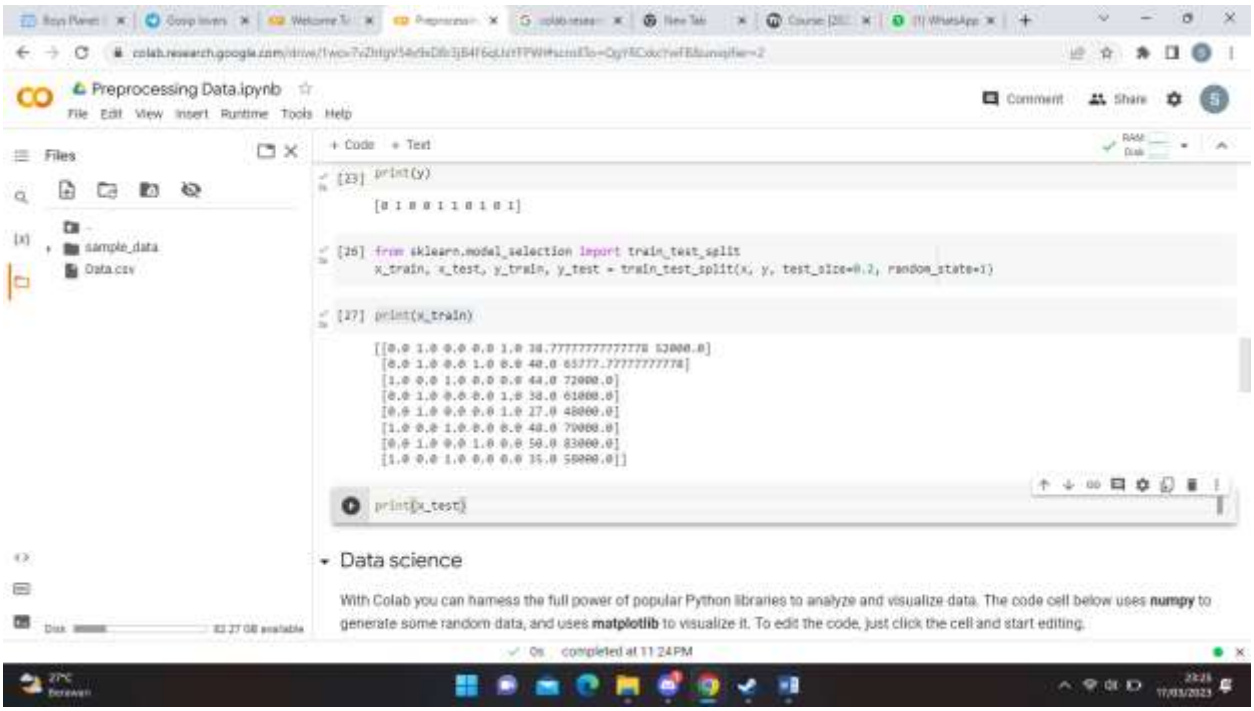
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[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
[26] from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
[27] print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.777777777777 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 65777.777777777]
[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
print(x_test)
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to generate some random data, and uses matplotlib to visualize it. To edit the code, just click the cell and start editing.
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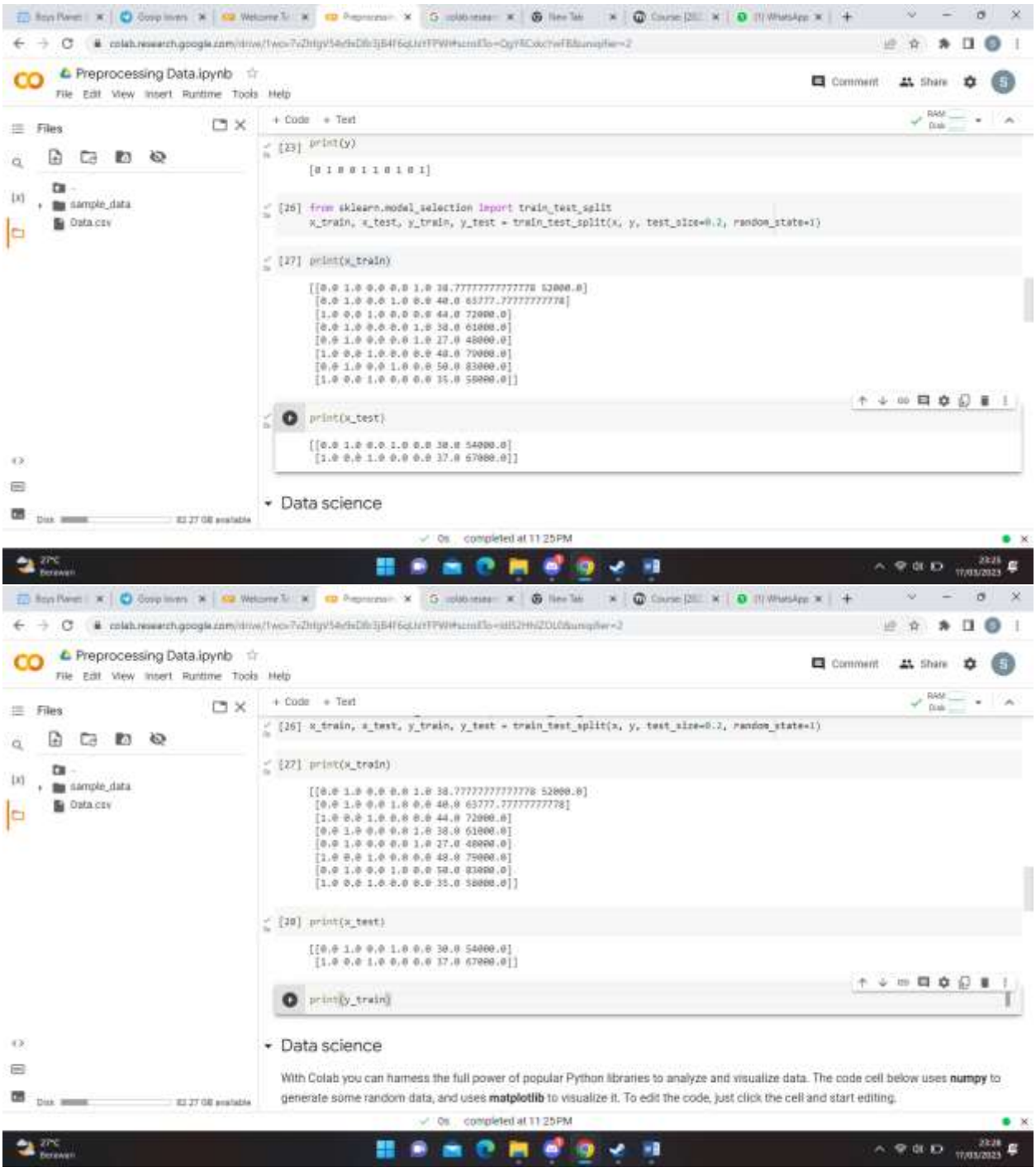
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[23] print(y)
[0 1 0 0 1 1 0 1 0 1]
[26] from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
[27] print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.777777777778 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.777777777778]
[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
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[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
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Data science
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[26] x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
[27] print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.777777777778 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.777777777778]
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[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
[28] print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
print(y_train)
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to generate some random data, and uses matplotlib to visualize it. To edit the code, just click the cell and start editing.
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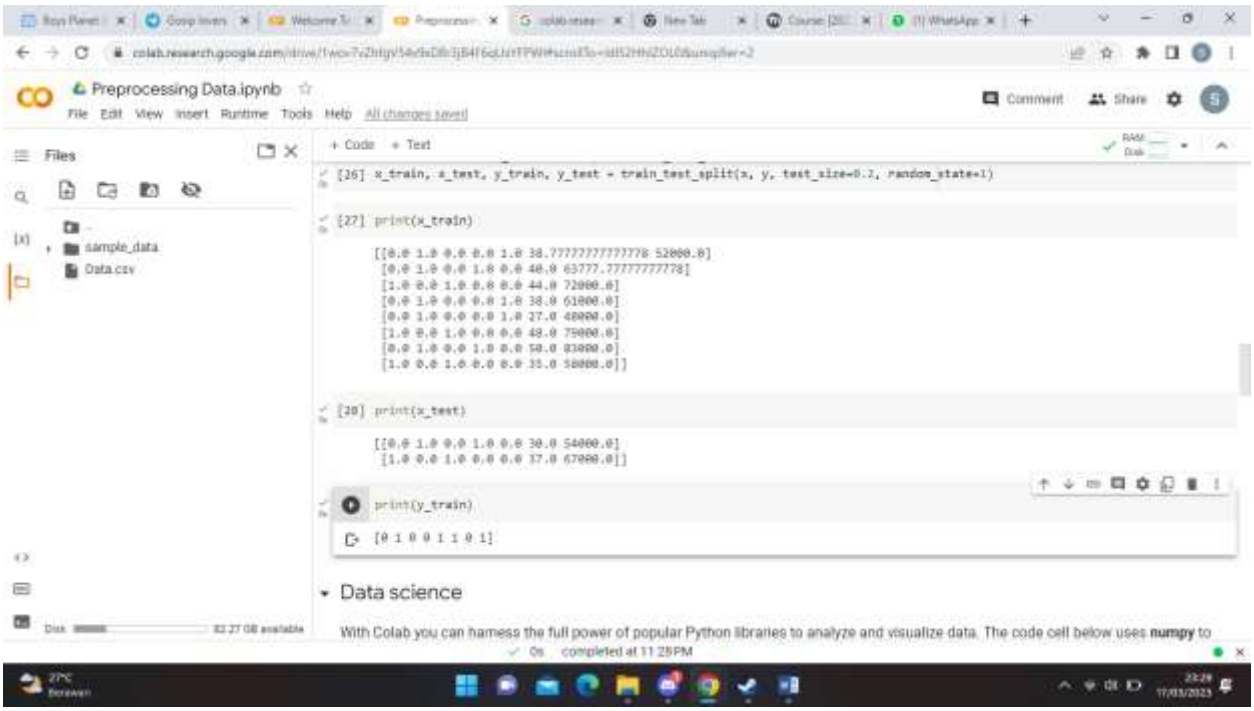
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[26] x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
[27] print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
[28] print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
print(y_train)
[0 1 0 0 1 1 0 1]
Data science
With Colab you can harness the full power of popular Python libraries to analyze and visualize data. The code cell below uses numpy to
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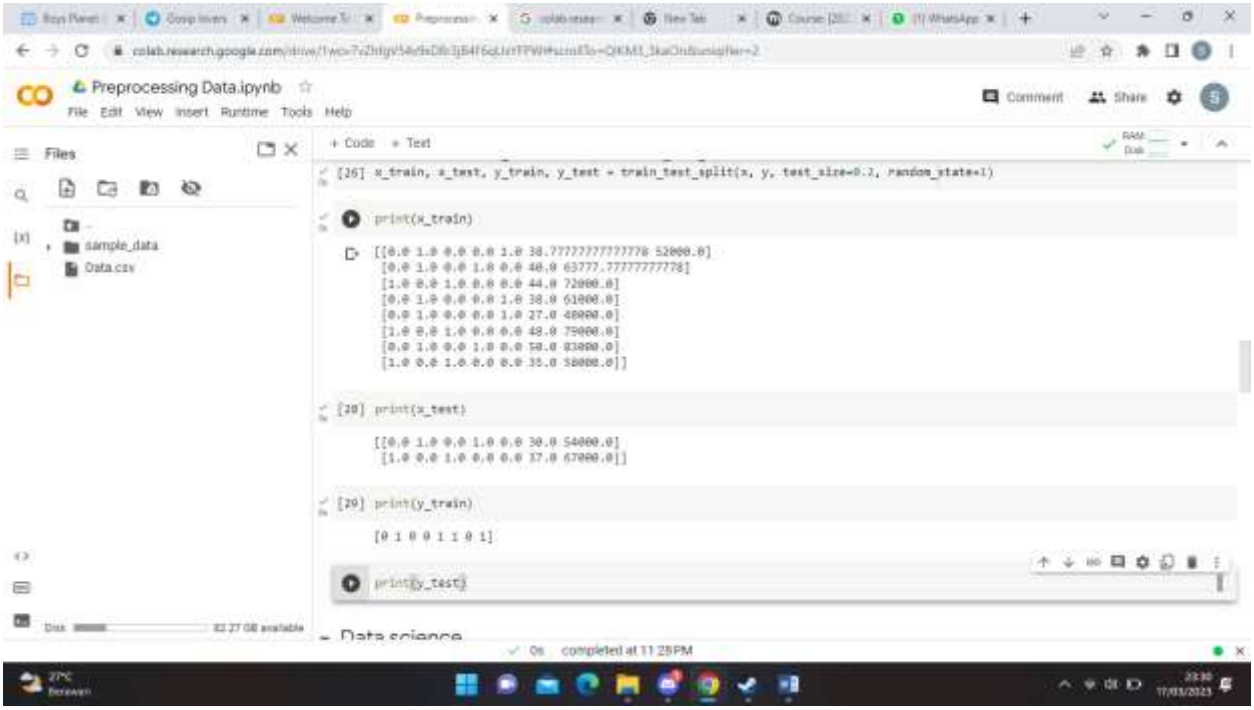
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[26] x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=1)
print(x_train)
[[0.0 1.0 0.0 0.0 1.0 38.77777777777778 52000.0]
[0.0 1.0 0.0 1.0 0.0 40.0 63777.77777777778]
[1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
[28] print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[29] print(y_train)
[0 1 0 0 1 1 0 1]
print(y_test)
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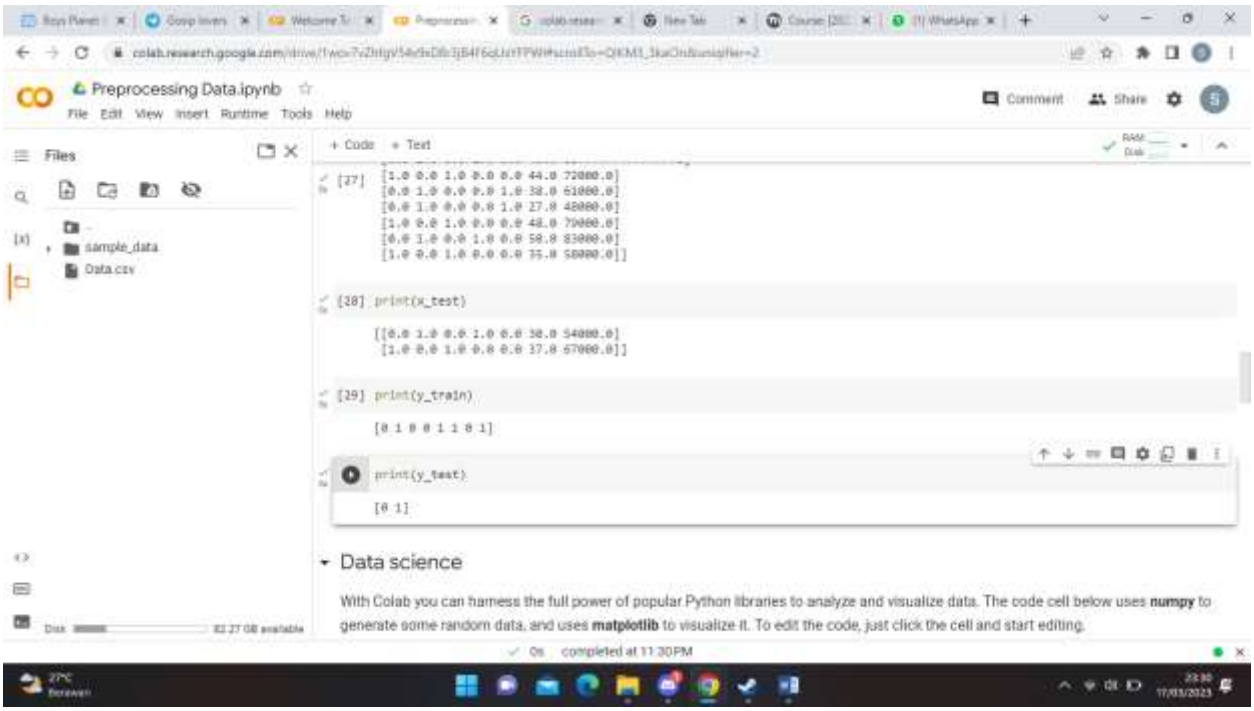
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[27] [1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
[28] print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[29] print(y_train)
[0 1 0 0 1 1 0 1]
print(y_test)
[0 1]
Data science
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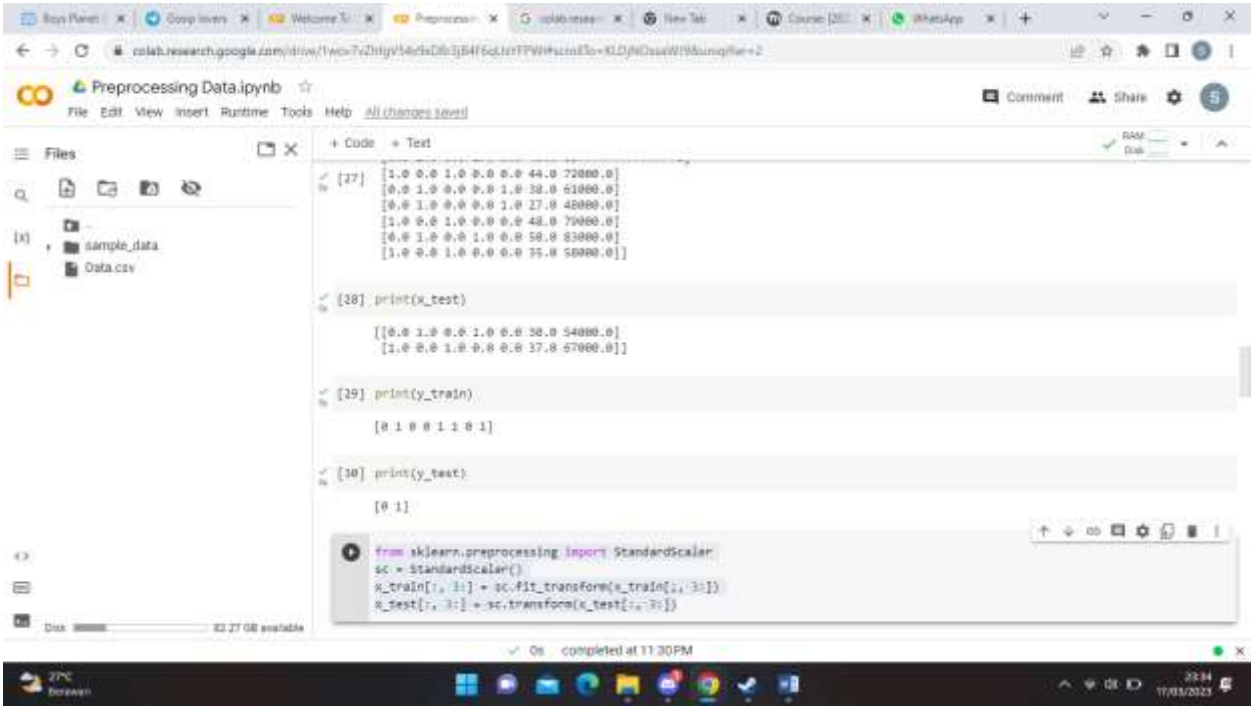
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[27] [1.0 0.0 1.0 0.0 0.0 44.0 72000.0]
[0.0 1.0 0.0 0.0 1.0 38.0 61000.0]
[0.0 1.0 0.0 0.0 1.0 27.0 48000.0]
[1.0 0.0 1.0 0.0 0.0 48.0 79000.0]
[0.0 1.0 0.0 1.0 0.0 50.0 83000.0]
[1.0 0.0 1.0 0.0 0.0 35.0 58000.0]]
[28] print(x_test)
[[0.0 1.0 0.0 1.0 0.0 30.0 54000.0]
[1.0 0.0 1.0 0.0 0.0 37.0 67000.0]]
[29] print(y_train)
[0 1 0 0 1 1 0 1]
[30] print(y_test)
[0 1]
from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
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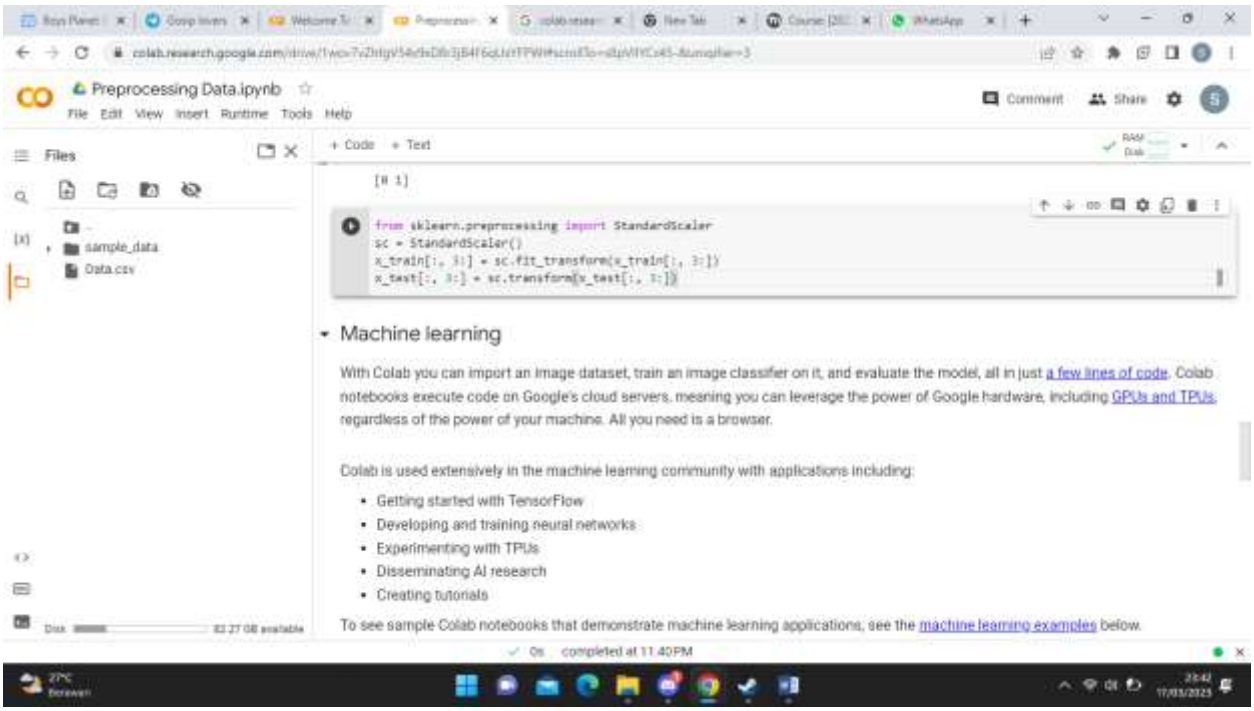
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[8 1]
from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
Machine learning
With Colab you can import an image dataset, train an image classifier on it, and evaluate the model, all in just a few lines of code. Colab notebooks execute code on Google's cloud servers, meaning you can leverage the power of Google hardware, including GPUs and TPUs, regardless of the power of your machine. All you need is a browser.
Colab is used extensively in the machine learning community with applications including:
Getting started with TensorFlow
Developing and training neural networks
Experimenting with TPUs
Disseminating AI research
Creating tutorials
To see sample Colab notebooks that demonstrate machine learning applications, see the machine learning examples below.
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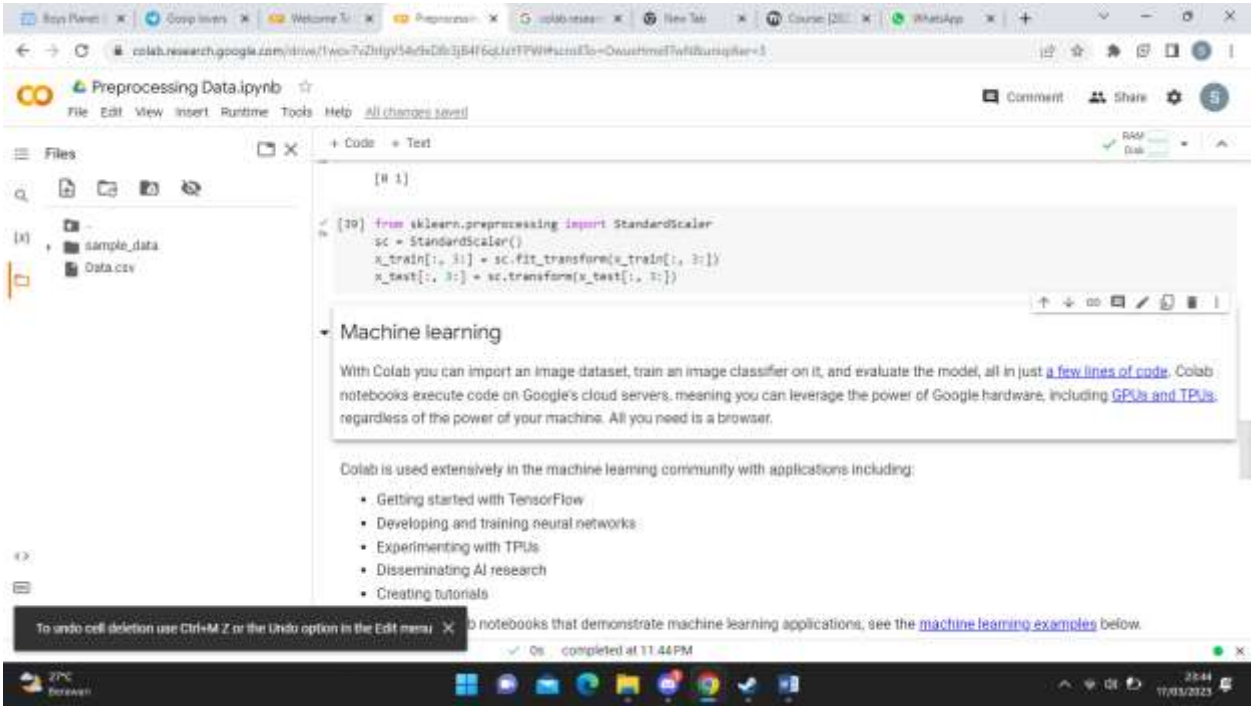
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[8 1]
[39] from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
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Colab is used extensively in the machine learning community with applications including:
Getting started with TensorFlow
Developing and training neural networks
Experimenting with TPUs
Disseminating AI research
Creating tutorials
To undo cell deletion use Ctrl+M Z or the Undo option in the Edit menu
machine learning examples below.
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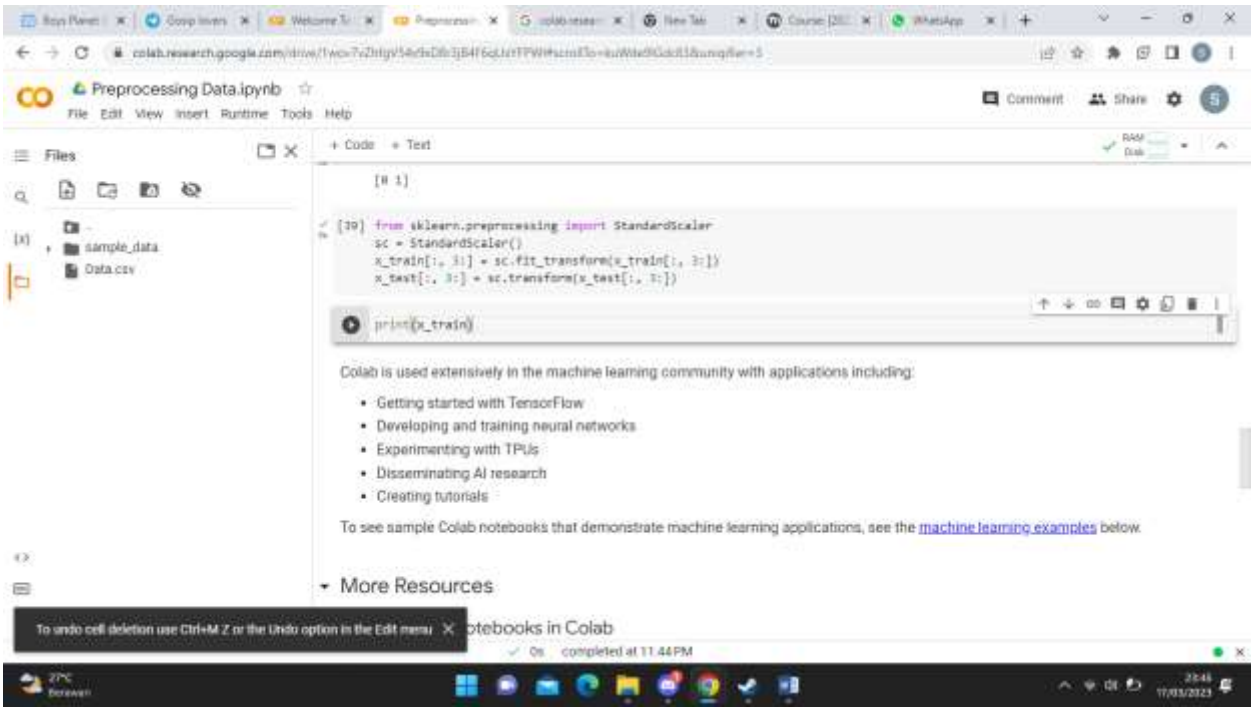
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sample_data
Data.csv
[30] from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
print(x_train)
Colab is used extensively in the machine learning community with applications including:
Getting started with TensorFlow
Developing and training neural networks
Experimenting with TPUs
Disseminating AI research
Creating tutorials
To see sample Colab notebooks that demonstrate machine learning applications, see the machine learning examples below.
More Resources
To undo cell deletion use Ctrl+M Z or the Undo option in the Edit menu
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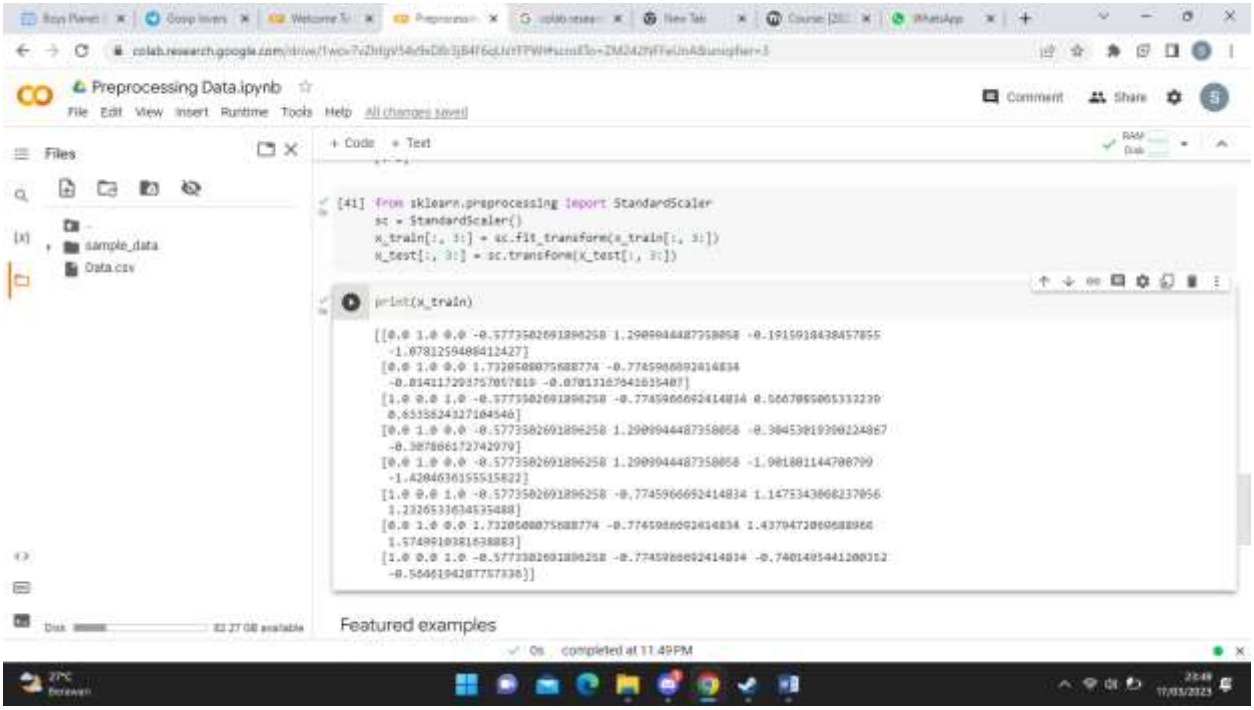
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[41] from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
print(x_train)
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-1.0781259408412427]
[0.0 1.0 0.0 1.7320508075688774 -0.7745966692414834
-0.8141729357057619 -0.07011167941635407]
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Featured examples
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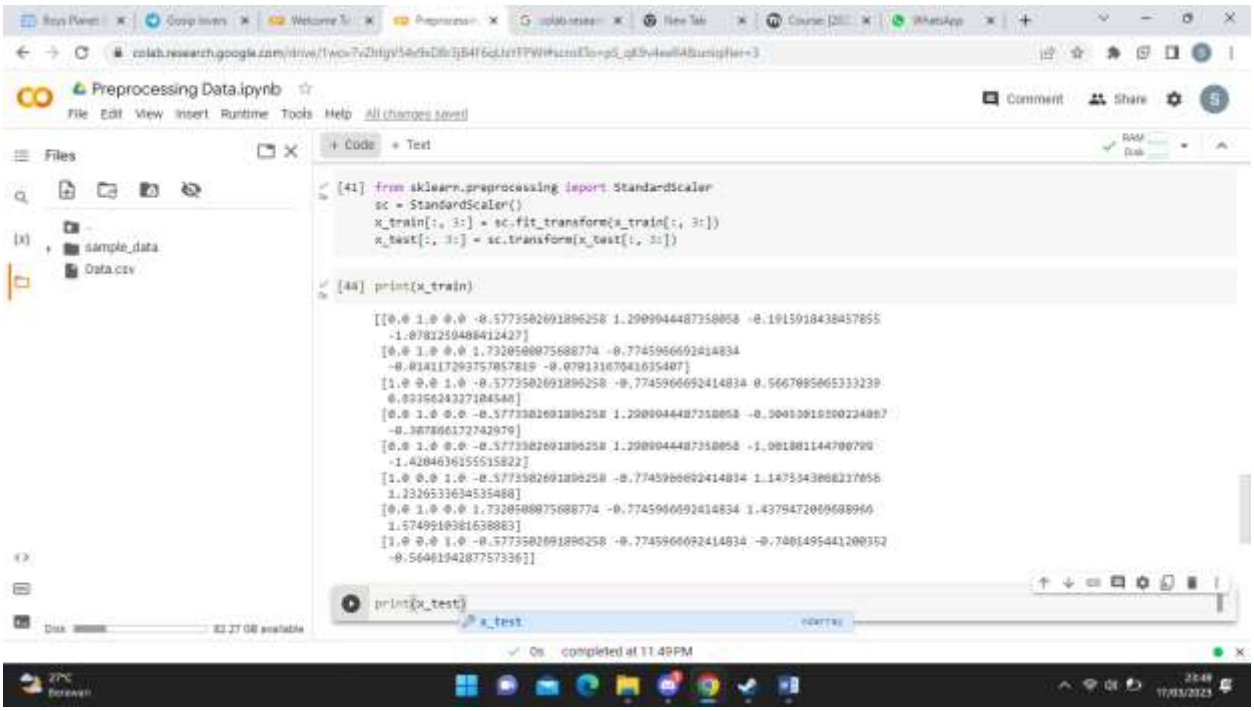
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sample_data
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[41] from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train[:, 3:] = sc.fit_transform(x_train[:, 3:])
x_test[:, 3:] = sc.transform(x_test[:, 3:])
[44] print(x_train)
[[0.0 1.0 0.0 -0.5773502691896258 1.2909944487358058 -0.1915918438457855
-1.0781259408412427]
[0.0 1.0 0.0 1.7320508075688774 -0.7745966692414834
-0.014117293757057819 -0.07911167941635407]
[1.0 0.0 1.0 -0.5773502691896258 -0.7745966692414834 0.5667085065333239
0.03356243271845481]
[0.0 1.0 0.0 -0.5773502691896258 1.2909944487358058 -0.5041301650024867
-0.38788617274297 9]
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-1.4284636155515822]
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1.2326533634535488]
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print(x_test)
x_test
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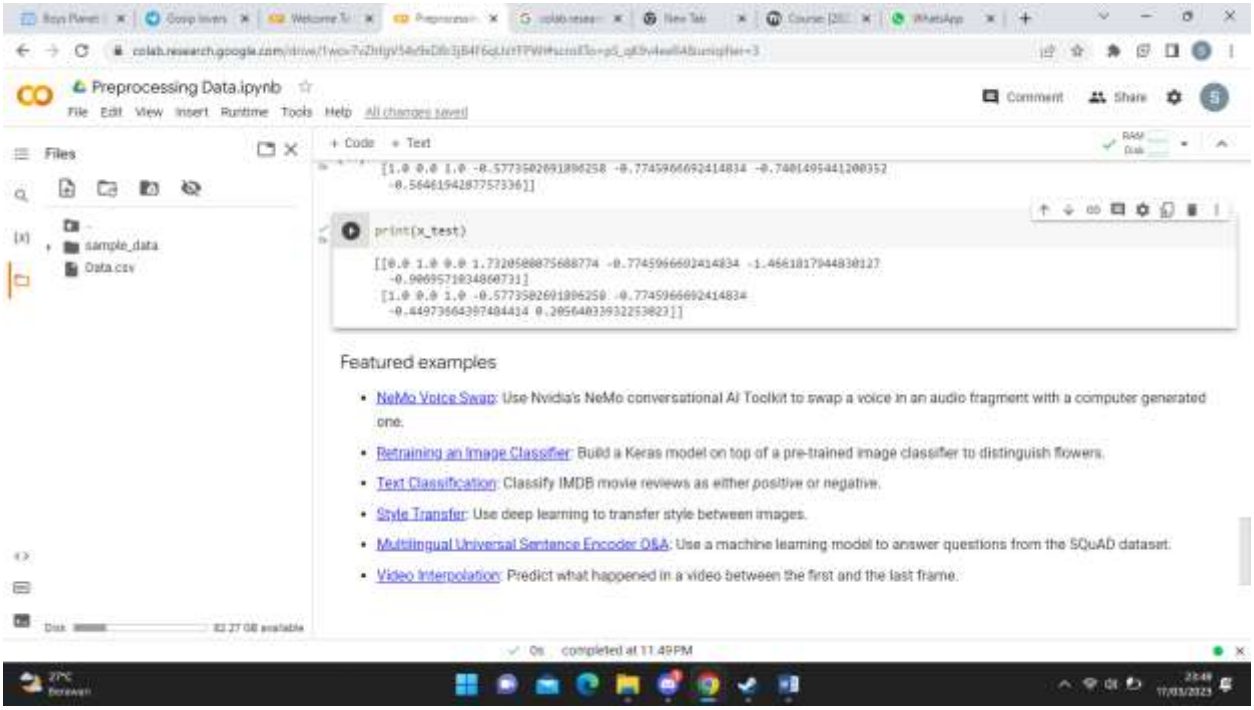
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Data.csv
[1.0 0.0 1.0 -0.5773502691896258 -0.7745966692414834 -0.7401495441200352
-0.5646194287757336]]
print(x_test)
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-0.9069571034860731]
[1.0 0.0 1.0 -0.5773502691896258 -0.7745966692414834
-0.4497366439748441 4 0.20564033932253823]]
Featured examples
NeMo Voice Swap: Use Nvidia's NeMo conversational AI Toolkit to swap a voice in an audio fragment with a computer generated one.
Retraining an Image Classifier: Build a Keras model on top of a pre-trained image classifier to distinguish flowers.
Text Classification: Classify IMDB movie reviews as either positive or negative.
Style Transfer: Use deep learning to transfer style between images.
Multilingual Universal Sentence Encoder Q&A: Use a machine learning model to answer questions from the SQuAD dataset.
Video Interpolation: Predict what happened in a video between the first and the last frame.
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