Software Engineering Tools Lab

Assignment No-2

PRN : 2019BTECS00055
PRN : 2019BTECS00063
PRN : 2019BTECS00067

Android SDK

1. **Original author :** Android was created by the Open Handset Alliance, which is led by Google.

2. **Developers :** Google

3. **Initial release :** On September 23, 2008, the Android 1.0 SDK (Release 1) was released.

4. **Stable release :** Android 12 (API level 31)

5. **Preview release :** Android 13

6. **Repository (with cloud support:** https://github.com/watson-developer-cloud/android-sdk

7. **Written in (Languages) :** Android software development is the process by which applications are created for devices running the Android operating system. Google states that "Android apps can be written using Kotlin, Java, and C++ languages" using the Android software development kit (SDK), while using other languages is also possible.

8. **Operating System support :** Currently supported development platforms include computers running Linux (any modern desktop Linux distribution), Mac OS X 10.5. 8 or later, and Windows 7 or later.

9. **Platform ,portability :** Cross-platform

10. **Available in (Total languages) :** 1 (English)

11. **List of languages supported :** Kotlin, Java, and C++ languages" using the Android software development kit (SDK), while using other languages is also possible.

12. **Type (Programming tool, integrated development environment etc.) :** The Android SDK (Software Development Kit) is a set of development tools that are used to develop applications for the Android platform. This SDK provides a selection of tools that are required to build Android applications and ensures the process goes as smoothly as possible.

13. **Website :** https://developer.android.com/studio

14. **Features :** Android SDK is a collection of libraries and Software Development tools that are essential for Developing Android Applications.

15. **Size (in MB, GB etc.) :** 872MB

16. **Privacy and Security :** Android continues to innovate in privacy.Help developers design apps that provide transparency for users, give control over private data access.

17. **Type of software (Open source/Licence) :** Licensed

18. **If Licence- Provide details. :** The Android Software Development Kit (referred to in the Licence Agreement as the "SDK" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of the Licence Agreement.

19. **Latest version :** Android 12 (API level 31)

20. **Cloud support (Yes/No) :** Yes

21. **Applicability :** SDK provides a selection of tools required to build Android apps or to ensure the process goes as smoothly as possible. Whether you end up creating an app with Java, Kotlin or C#, you need the SDK to get it to run on an Android device and access unique features of the OS.

22. **Drawbacks (if any) :**

    1. Android Studio is not light weighted. It cannot be used on low configuration machines.
    2. Emulator is very slow.
    3. Takes too long to build and run.

Que 2 : Implement linear regression problem using Google colab (Perform preprocessing, training and testing)

Dataset 2- https://archive.ics.uci.edu/ml/datasets/Air+Quality

```
import pandas as pd

from sklearn import linear_model

import numpy as np

from google.colab import files

import io
```

```
import matplotlib.pyplot as plt
```

```
from google.colab import drive

drive.mount('/content/drive')
```

```
uploaded = files.upload()
```

```
xlsx_file = io.BytesIO(uploaded.get('AirQualityUCI.xlsx'))
```

```
data = pd.read_excel(xlsx_file)
```

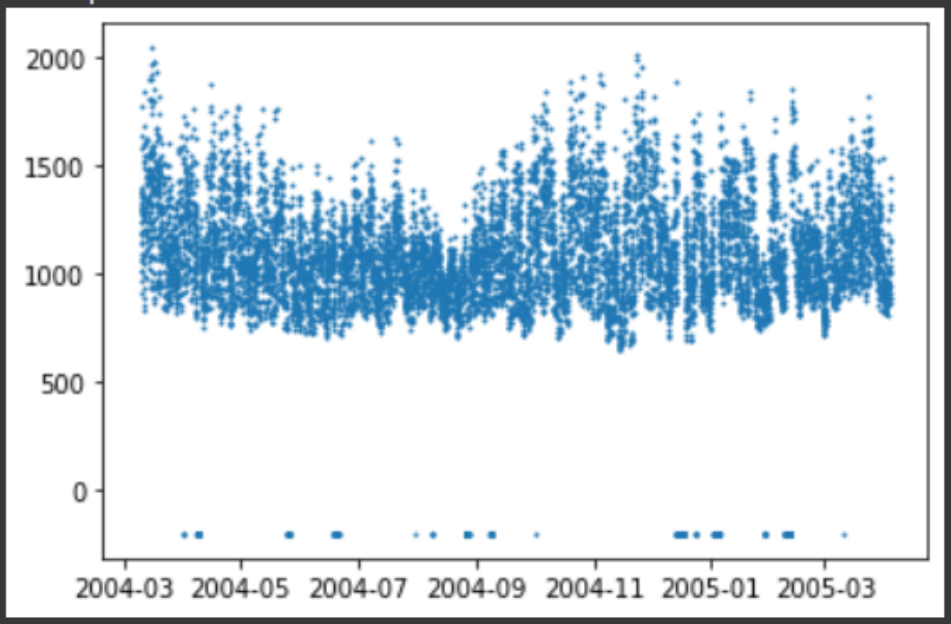
```
print(data.items)
```

```
<bound method DataFrame.items of            Date      Time  CO(GT)   ...
T          RH        AH

0    2004-03-10  18:00:00     2.6  ...   13.600  48.875001  0.757754

1    2004-03-10  19:00:00     2.0  ...   13.300  47.700000  0.725487

2    2004-03-10  20:00:00     2.2  ...   11.900  53.975000  0.750239

3    2004-03-10  21:00:00     2.2  ...   11.000  60.000000  0.786713
```

```
4    2004-03-10  22:00:00     1.6  ...  11.150  59.575001  0.788794

...         ...       ...     ...  ...     ...        ...       ...

9352 2005-04-04  10:00:00     3.1  ...  21.850  29.250000  0.756824

9353 2005-04-04  11:00:00     2.4  ...  24.325  23.725000  0.711864

9354 2005-04-04  12:00:00     2.4  ...  26.900  18.350000  0.640649

9355 2005-04-04  13:00:00     2.1  ...  28.325  13.550000  0.513866

9356 2005-04-04  14:00:00     2.2  ...  28.500  13.125000  0.502804


[9357 rows x 15 columns]>
```

```
x = data['Date']

y = data['PT08.S1(CO)']

plt.scatter(x,y,s=1)
```

```
<matplotlib.collections.PathCollection at 0x7f0934a03310>
```



```
model = linear_model.LinearRegression()

model.fit(x,y)



predy = model.predict(x)
```