

Project	Car Resale value prediction
Team ID	PNT2022TMID13795
Date	25 August 2022

Pre-requisites:

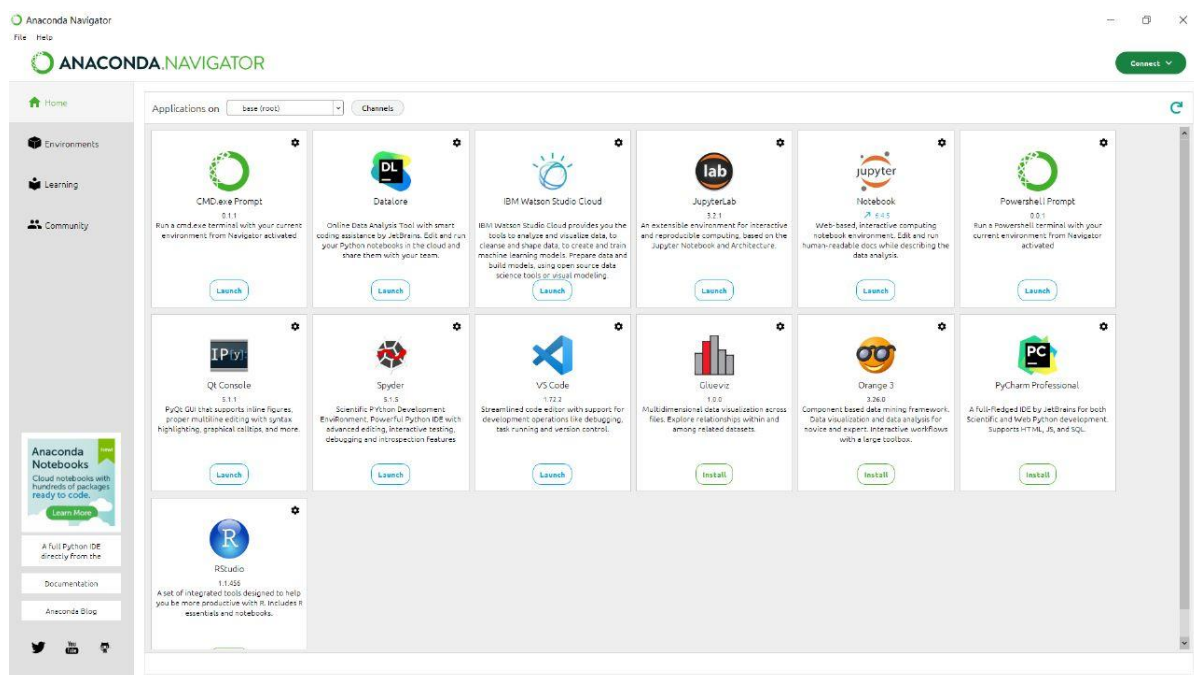
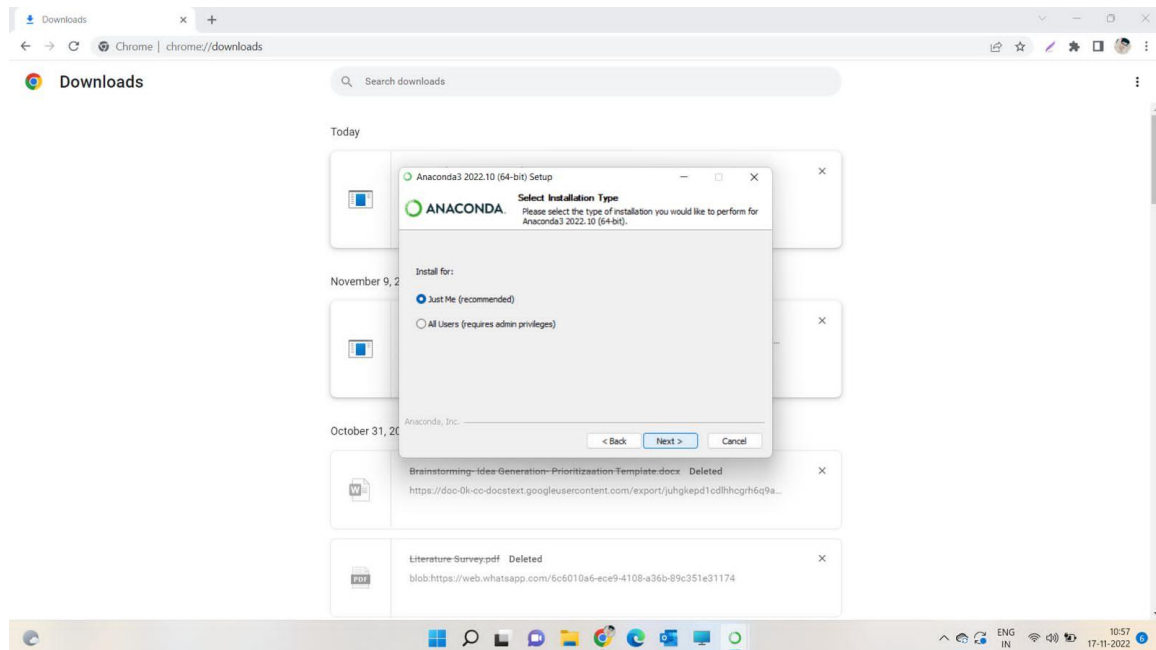
In order to develop this project, we need to install the following software/packages:

Step 1: Anaconda Navigator:

Anaconda Navigator is a free and open-source distribution of the Python and R programming languages for data science and machine learning related applications. It can be installed on Windows, Linux, and macOS.

Anaconda is an open-source, cross-platform, package management system. Anaconda has great tools like JupyterLab, Jupyter Notebook, QtConsole, Spyder, Glueviz, Orange, Rstudio, and Visual Studio

Code. For this project, we will be using Jupyter notebook and Spyder.



Step 2: To build Machine learning models

Require the following packages Sklearn: Scikit-learn is a library in Python that provides many unsupervised and supervised learning algorithm

NumPy: NumPy is a Python package that stands for 'Numerical Python'. It is the core library for scientific computing, which contains a powerful n-dimensional

array object Pandas: pandas is a fast, powerful, flexible, and easy to use

open-source data analysis and manipulation tool, built on top of the Python programming language.

Matplotlib: It provides an object-oriented API for embedding plots into applications using general-purpose GUI toolkits

Flask: Web framework used for building Web applications. If you are using anaconda navigator, follow the below steps to download the required packages:

If you are using anaconda navigator, follow the below steps to download the required packages:

Open the anaconda prompt.

Type “pip install numpy” and click enter.

Type “pip install pandas” and click enter.

Type “pip install matplotlib” and click enter.

Type “pip install scikit-learn” and click enter.

Type “pip install Flask” and click enter.

If you are using Pycharm IDE, you can install the packages through the command prompt and follow the same syntax as above

```
Command Prompt
C:\Users\Selva Bharathi>pip3 install pandas
Collecting pandas
  Downloading pandas-1.5.1-cp310-cp310-win_amd64.whl (10.4 MB)
    | 10.4 MB 595 kB/s
Collecting python-dateutil>=2.8.1
  Downloading python_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)
    | 247 kB 1.1 MB/s
Collecting pytz>=2020.1
  Downloading pytz-2022.6-py2.py3-none-any.whl (498 kB)
    | 498 kB 1.3 MB/s
Requirement already satisfied: numpy>=1.21.0 in c:\users\selva bharathi\appdata\local\programs\python\python310\lib\site-packages (from pandas) (1.23.4)
Collecting six>=1.5
  Downloading six-1.16.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: six, pytz, python-dateutil, pandas
Successfully installed pandas-1.5.1 python-dateutil-2.8.2 pytz-2022.6 six-1.16.0
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>pip3 install matplotlib
Collecting matplotlib
  Downloading matplotlib-3.6.2-cp310-cp310-win_amd64.whl (7.2 MB)
    | 7.2 MB 939 kB/s
Collecting fonttools>=4.22.0
  Downloading fonttools-4.38.0-py3-none-any.whl (965 kB)
    | 965 kB 819 kB/s
Collecting packaging>=20.0
  Downloading packaging-21.3-py3-none-any.whl (40 kB)
    | 40 kB 429 kB/s
Collecting pillow>=6.2.0
  Downloading Pillow-9.3.0-cp310-cp310-win_amd64.whl (2.9 MB)
    | 2.9 MB 1.3 MB/s
Collecting contourpy>=1.0.1
  Downloading contourpy-1.0.6-cp310-cp310-win_amd64.whl (163 kB)
    | 163 kB 1.3 MB/s
Collecting kiwisolver>=1.0.1
  Downloading kiwisolver-1.4.4-cp310-cp310-win_amd64.whl (55 kB)
    | 55 kB 377 kB/s
Requirement already satisfied: numpy>=1.19 in c:\users\selva bharathi\appdata\local\programs\python\python310\lib\site-packages (from matplotlib) (1.23.4)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\selva bharathi\appdata\local\programs\python\python310\lib\site-packages (from matplotlib) (2.8.2)
Collecting cycler>=0.10
  Downloading cycler-0.11.0-py3-none-any.whl (6.4 kB)
Collecting pyparsing>=2.2.1
  Downloading pyparsing-3.0.9-py3-none-any.whl (98 kB)
    | 98 kB 566 kB/s
Requirement already satisfied: six>=1.5 in c:\users\selva bharathi\appdata\local\programs\python\python310\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
Installing collected packages: pyparsing, pillow, packaging, kiwisolver, fonttools, cycler, contourpy, matplotlib
Successfully installed contourpy-1.0.6 cycler-0.11.0 fonttools-4.38.0 kiwisolver-1.4.4 matplotlib-3.6.2 packaging-21.3 pillow-9.3.0 pyparsing-3.0.9
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
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C:\Users\Selva Bharathi>

Command Prompt
Microsoft Windows [Version 10.0.19045.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Selva Bharathi>pip3 install numpy
Collecting numpy
  Downloading numpy-1.23.4-cp310-cp310-win_amd64.whl (14.6 MB)
    | 14.6 MB 261 kB/s
Installing collected packages: numpy
Successfully installed numpy-1.23.4
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>pip3 install pandas
Collecting pandas
  Downloading pandas-1.5.1-cp310-cp310-win_amd64.whl (10.4 MB)
    | 10.4 MB 595 kB/s
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  Downloading six-1.16.0-py2.py3-none-any.whl (11 kB)
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WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>
```

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Command Prompt
C:\Users\Selva Bharathi>pip3 install scikitlearn
ERROR: Could not find a version that satisfies the requirement scikitlearn (from versions: none)
ERROR: No matching distribution found for scikitlearn
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>pip3 install flask
Collecting flask
  Downloading Flask-2.2.2-py3-none-any.whl (101 kB)
    |#####| 101 kB 535 kB/s
Collecting Jinja2>=3.0
  Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
    |#####| 133 kB 2.2 MB/s
Collecting Werkzeug>=2.2.2
  Downloading Werkzeug-2.2.2-py3-none-any.whl (232 kB)
    |#####| 232 kB 1.7 MB/s
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting click>=8.0
  Downloading click-8.1.3-py3-none-any.whl (96 kB)
    |#####| 96 kB 530 kB/s
Collecting colorama
  Downloading colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.1.1-cp310-cp310-win_amd64.whl (17 kB)
Installing collected packages: MarkupSafe, colorama, Werkzeug, Jinja2, itsdangerous, click, flask
Successfully installed Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 colorama-0.4.6 flask-2.2.2 itsdangerous-2.1.2
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>pip3 install scikit-learn
Collecting scikit-learn
  Downloading scikit-learn-1.1.3-cp310-cp310-win_amd64.whl (7.5 MB)
    |#####| 7.5 MB 1.7 MB/s
Requirement already satisfied: numpy>=1.17.3 in c:\users\sSelva Bharathi\appdata\local\programs\python\python310\lib\site-packages (from scikit-learn) (1.23.4)
Collecting threadpoolctl>=2.0.0
  Downloading threadpoolctl-3.1.0-py3-none-any.whl (14 kB)
Collecting joblib>=1.0.0
  Downloading joblib-1.2.0-py3-none-any.whl (297 kB)
    |#####| 297 kB 3.2 MB/s
Collecting scipy>=1.3.2
  Downloading scipy-1.9.3-cp310-cp310-win_amd64.whl (40.1 MB)
    |#####| 40.1 MB 139 kB/s
Installing collected packages: threadpoolctl, scipy, joblib, scikit-learn
Successfully installed joblib-1.2.0 scikit-learn-1.1.3 scipy-1.9.3 threadpoolctl-3.1.0
WARNING: You are using pip version 21.2.4; however, version 22.3.1 is available.
You should consider upgrading via the 'C:\Users\Selva Bharathi\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Selva Bharathi>
```