Streamlit

Summary	Here we will try to understand how to use Streamlit on a very basic level
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Streamlit intro:

"Streamlit is an open-source python based app framework and is the easiest way for data scientists and machine learning engineers to create beautiful, performant apps in only a few hours! All in pure Python. All for free!"

It is a tool to create Web-based front ends with a focus for the Machine Learning scientist or engineer.

Specifically, Streamlit uses HTML, CSS, and Javascript but does not need the developer to know HTML, CSS, and Javascript.

The Streamlit team is enabling the Data scientists to deploy their models without using Flask, Django, or other tools.

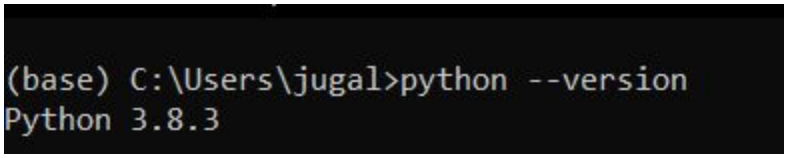
PS - It is not a replacement for Flask or FastAPI.

How to install and start

1. Make sure that you have Python 3.6 or greater installed.

#Check your python version with the below command

Python --version



#pip install streamlit

```
(base) C:\Users\jugal>pip install streamlit
Collecting streamlit
  Downloading streamlit-0.69.2-py2.py3-none-any.whl (7.4 MB)
     |████████████████████████████████| 7.4 MB 6.8 MB/s
Requirement already satisfied: python-dateutil in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (2.8.1)
Collecting astor
  Downloading astor-0.8.1-py2.py3-none-any.whl (27 kB)
Requirement already satisfied: requests in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (2.24.0)
Requirement already satisfied: toml in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (0.10.1)
Collecting pyarrow
  Downloading pyarrow-1.0.1-cp38-cp38-win_amd64.whl (10.5 MB)
     |████████████████████████████████| 10.5 MB 6.8 MB/s
Requirement already satisfied: packaging in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (20.4)
Requirement already satisfied: pillow>=6.2.0 in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (7.2.0)
Requirement already satisfied: tornado>=5.0 in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (6.0.4)
Collecting altair>=3.2.0
  Downloading altair-4.1.0-py3-none-any.whl (727 kB)
     |████████████████████████████████| 727 kB 6.8 MB/s
Collecting blinker
  Downloading blinker-1.4.tar.gz (111 kB)
     |████████████████████████████████| 111 kB ...
Collecting pydeck>=0.1.dev5
  Downloading pydeck-0.5.0b1-py2.py3-none-any.whl (4.4 MB)
     |████████████████████████████████| 4.4 MB ...
Collecting gitpython
  Downloading GitPython-3.1.9-py3-none-any.whl (159 kB)
     |████████████████████████████████| 159 kB ...
Requirement already satisfied: watchdog in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (0.10.3)
Collecting protobuf>=3.6.0
  Downloading protobuf-3.13.0-py2.py3-none-any.whl (438 kB)
     |████████████████████████████████| 438 kB ...
Collecting cachetools>=4.0
  Downloading cachetools-4.1.1-py3-none-any.whl (10 kB)
Requirement already satisfied: pandas>=0.21.0 in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (1.0.5)
Requirement already satisfied: click>=7.0 in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (7.1.2)
Requirement already satisfied: numpy in c:\users\jugal\anaconda3\lib\site-packages (from streamlit) (1.18.5)
Collecting validators
  Downloading validators-0.18.1-py3-none-any.whl (19 kB)
Collecting botocore>=1.13.44
  Downloading botocore-1.18.18-py2.py3-none-any.whl (6.7 MB)
     |████████████████████████████████| 6.7 MB 6.4 MB/s
Collecting enum-compat
  Downloading enum_compat-0.0.3-py3-none-any.whl (1.3 kB)
Collecting base58
  Downloading base58-2.0.1-py3-none-any.whl (4.3 kB)
Collecting boto3
  Downloading boto3-1.15.18-py2.py3-none-any.whl (129 kB)
```

I have already installed so requirements satisfied

#Run hello*

Streamlit hello

```
(base) C:\Users\jugal>streamlit hello

  Welcome to Streamlit!
```

Example

```
#code
import streamlit as st
import os
import pandas as pd


os.chdir('C:/Users/jugal/OneDrive/Desktop/Courses neu/Algorithmic dm/Lab 1')#your directory

st.title('Heart Disease Diagnosis Assistant')
st.markdown('This application is meant to **_assist_ _doctors_ _in_ diagnosing**, if a patient
has a **_Heart_ _Disease_ _or_ not** using few details about their health')


df = pd.read_csv('heart.csv')

if st.checkbox('Show me Training Data'):
    st.dataframe(df)

st.markdown('Please **Enter _the_ _below_ details** to know the results -')

age = st.text_input(label='Age')

gender_ls = ['Male', 'Female']
sex = st.selectbox('Gender', gender_ls)

cp_ls = ['Typical Angina', 'Atypical Angina', 'Non-anginal pain', 'Asymptomatic']
cp = st.multiselect('Chest pain Type', cp_ls)

restbp = st.slider('Resting Blood Pressure', 0, 220, 120)

chol = st.slider('Serum Cholesterol in mg/dl', 0, 600, 150)

fbs_ls = ['fasting blood sugar > 120 mg/dl', 'fasting blood sugar < 120 mg/dl']
fbs = st.selectbox('Fasting Blood Sugar (>126 mg/dL signals diabetes)', fbs_ls)



if st.button('Check Diagnosis'):

    st.header('A Machine Learning Model would predict this')
```

#to run it, type this in the command prompt after giving your directory

Streamlit run app.py