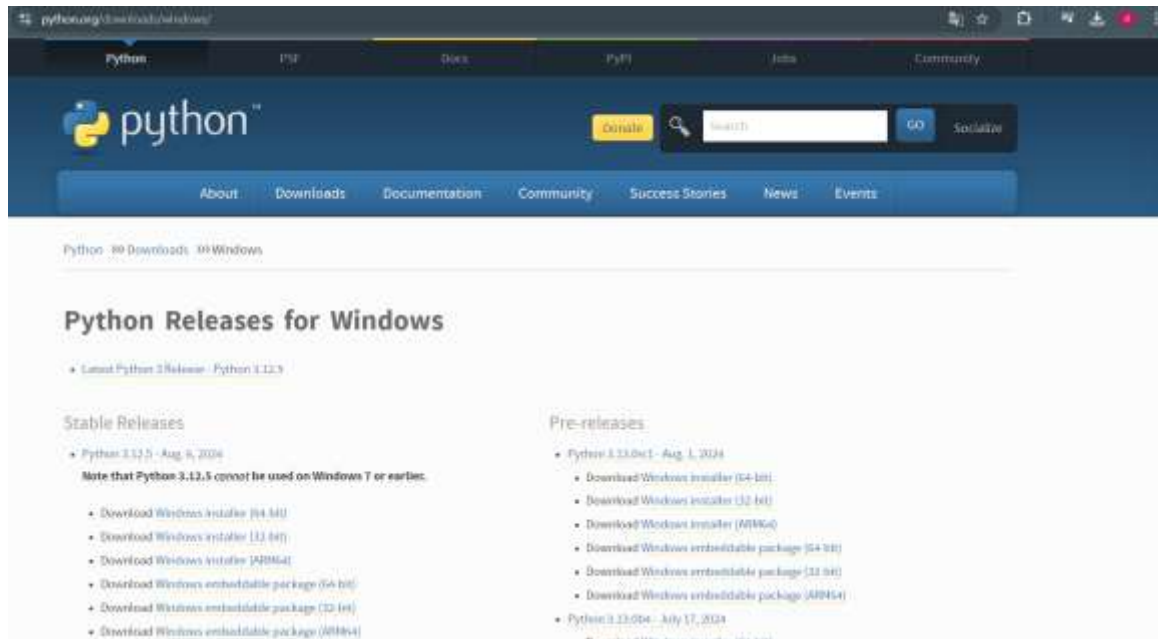


Panduan Installation Aplikasi Identifikasi Pencemaran Udara

Aplikasi berbasis website ini adalah program dari tugas akhir dengan judul “Identifikasi Pencemaran Udara Menggunakan Metode Random Forest”. Berikut ini langkah-langkah instalasi yaitu:

1. Cek pada laptop atau komputer anda apakah sudah di install python. Jika belum unduh terlebih dahulu python pada website resminya. Disini saya berikan contoh untuk sistem operasi windows. Ini link untuk downloadnya “<https://www.python.org/downloads/windows/>”



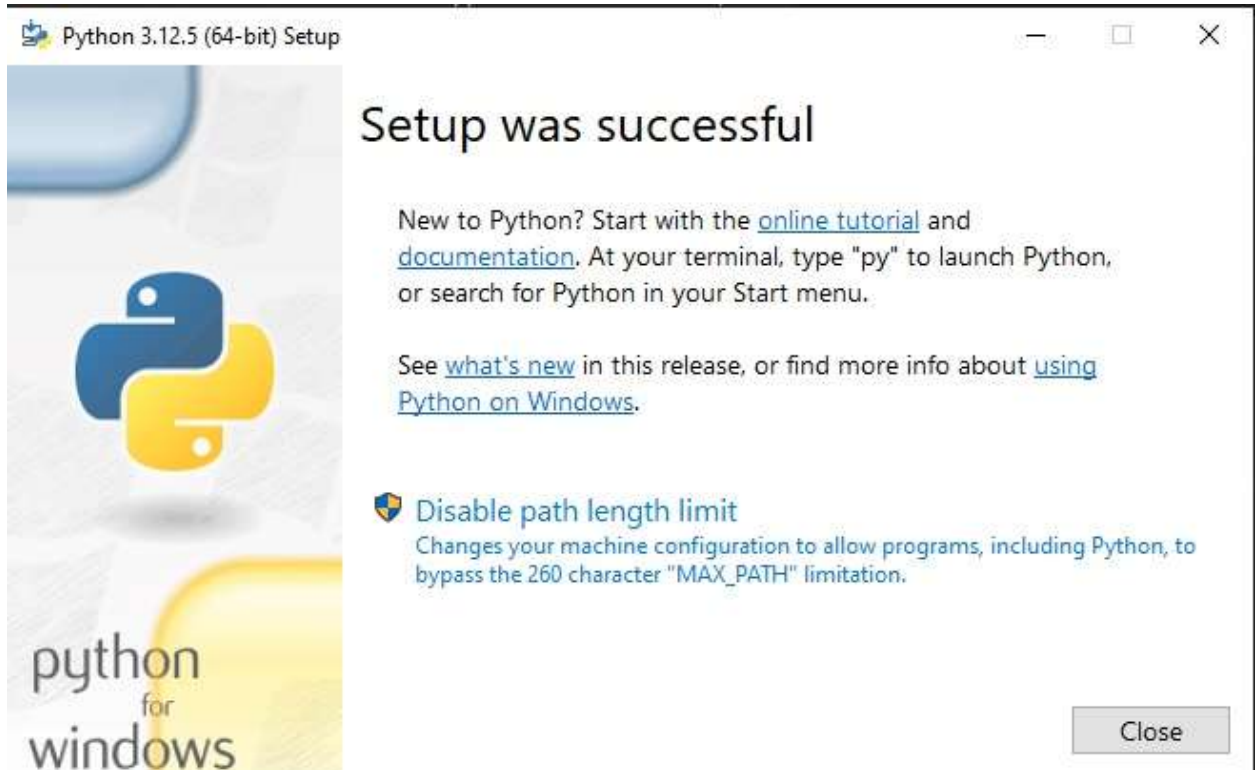
2. Di sini saya memilih versi python 3.12.5 seperti di bawah ini.



3. Kemudian tunggu hingga download selesai, kemudian buka file instalasi python centang bagian “Add PYTHON.exe to PATH” dan “Use admin privileges when installing py.exe” agar dapat semua perintah python semua direktori pada komputer dengan command prompt. Kemudian klik “Install Now”. Seperti dibawah ini.



4. Kemudian setelah instalasi selesai, klik pada pilihan “Disable path length limit” untuk menonaktifkan batasan path direktori pada saat penggunaan python.



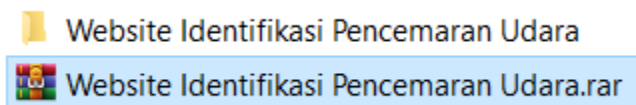
5. Kemudian buka command prompt dan ketik “py -0”. Klik enter maka akan muncul seperti dibawah ini.

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4651]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lenovo>py -0
-V:3.12 * Python 3.12 (64-bit)
-V:3.10 Python 3.10 (64-bit)

C:\Users\lenovo>
```

6. Unduh file aplikasi indentifikasi pencemaran udara.rar. Kemudian ekstraksi file dengan mengklik kanan pilih “Extract Here” maka akan muncul seperti ini.



7. Setelah aplikasi di extract, kemudian buka command prompt. Pada command prompt ubah sesuai dengan direktori tempat file website identifikasi pencemaran udara tersimpan. Contoh ketika anda menaruh file “Website Identifikasi Pencemaran Udara.rar” pada folder Document. Kemudian pada command prompt ketik “cd \Users\lenovo\Documents\Website Identifikasi Pencemaran Udara”

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4651]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lenovo>cd \Users\lenovo\Documents\Website Identifikasi Pencemaran Udara\
C:\Users\lenovo\Documents\Website Identifikasi Pencemaran Udara>
```

8. Kemudian jalankan “pip install -r requirement.txt” di command prompt untuk menginstall library yang di butuhkan. Jika anda terkendala seperti dibawah ini.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.4651]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Win10>py -0
-V:3.12 * Python 3.12 (64-bit)

C:\Users\Win10>cd Users\Win10\Documents\Website Identifikasi Pencemaran Udara
The system cannot find the path specified.

C:\Users\Win10>cd \Users\Win10\Documents\Website Identifikasi Pencemaran Udara

C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install -r requirements
ERROR: Could not open requirements file: [Errno 2] No such file or directory: 'requirements'

C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install -r requirements.txt
Collecting streamlit==1.2.0 (from -r requirements.txt (line 1))
  Downloading streamlit-1.2.0-py2.py3-none-any.whl.metadata (1.1 kB)
Collecting pickleshare==0.7.5 (from -r requirements.txt (line 2))
  Downloading pickleshare-0.7.5-py2.py3-none-any.whl.metadata (1.5 kB)
Collecting scikit-learn==1.0.1 (from -r requirements.txt (line 3))
  Downloading scikit-learn-1.0.1.tar.gz (6.6 MB)
----- 6.6/6.6 MB 4.0 MB/s eta 0:00:00
Installing build dependencies ... done
Getting requirements to build wheel ... done
Preparing metadata (pyproject.toml) ... error
error: subprocess-exited-with-error

× Preparing metadata (pyproject.toml) did not run successfully.
  exit code: 1
  → (19 lines of output)
```

9. Maka anda harus ketik di command prompt “pip install streamlit”

```
Administrator: Command Prompt

C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install streamlit
Collecting streamlit
  Downloading streamlit-1.37.1-py2.py3-none-any.whl.metadata (8.5 kB)
Collecting altair<5,>=4.0 (from streamlit)
  Downloading altair-5.3.0-py3-none-any.whl.metadata (9.2 kB)
Collecting blinker<2,>=1.0.0 (from streamlit)
  Downloading blinker-1.8.2-py3-none-any.whl.metadata (1.6 kB)
Collecting cachetools<6,>=4.0 (from streamlit)
  Downloading cachetools-5.4.0-py3-none-any.whl.metadata (5.3 kB)
Collecting click<9,>=7.0 (from streamlit)
  Downloading click-8.1.7-py3-none-any.whl.metadata (3.0 kB)
Collecting numpy<3,>=1.20 (from streamlit)
  Downloading numpy-2.0.1-cp312-cp312-win_and64.whl.metadata (60 kB)
Collecting packaging<25,>=20 (from streamlit)
  Downloading packaging-24.1-py3-none-any.whl.metadata (3.2 kB)
Collecting pandas<3,>=1.3.0 (from streamlit)
  Downloading pandas-2.2.2-cp312-cp312-win_and64.whl.metadata (19 kB)
Collecting pillow<11,>=7.1.0 (from streamlit)
  Downloading pillow-10.4.0-cp312-cp312-win_and64.whl.metadata (9.3 kB)
Collecting protobuf<6,>=3.20 (from streamlit)
  Downloading protobuf-5.27.3-cp310-ab13-win_and64.whl.metadata (502 bytes)
Collecting pyarrow<=7.0 (from streamlit)
  Downloading pyarrow-17.0.0-cp312-cp312-win_and64.whl.metadata (3.4 kB)
Collecting requests<3,>=2.27 (from streamlit)
  Downloading requests-2.32.3-py3-none-any.whl.metadata (4.6 kB)
Collecting rich<14,>=10.14.0 (from streamlit)
  Downloading rich-13.7.1-py3-none-any.whl.metadata (18 kB)
Collecting tenacity<9,>=8.1.0 (from streamlit)
  Downloading tenacity-8.5.0-py3-none-any.whl.metadata (1.2 kB)
```

10. Kemudian anda harus ketik di command prompt “pip install pickleshare”


```
Select Administrator: Command Prompt

C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install pickleshare
Collecting pickleshare
  Using cached pickleshare-0.7.5-py2.py3-none-any.whl.metadata (1.5 kB)
Downloading pickleshare-0.7.5-py2.py3-none-any.whl (6.9 kB)
Installing collected packages: pickleshare
Successfully installed pickleshare-0.7.5
```

11. Kemudian anda harus ketik di command prompt “pip install scikit-learn”

```
C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install scikit-learn
Collecting scikit-learn
  Downloading scikit_learn-1.5.1-cp312-cp312-win_amd64.whl.metadata (12 kB)
Requirement already satisfied: numpy>=1.19.5 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from scikit-learn) (2.0.1)
Collecting scipy>=1.0.0 (from scikit-learn)
  Using cached scipy-1.14.0-cp312-cp312-win_amd64.whl.metadata (60 kB)
Collecting joblib>=1.2.0 (from scikit-learn)
  Downloading joblib-1.4.2-py3-none-any.whl.metadata (5.4 kB)
Collecting threadpoolctl>=3.1.0 (from scikit-learn)
  Downloading threadpoolctl-3.5.0-py3-none-any.whl.metadata (13 kB)
Downloading scikit_learn-1.5.1-cp312-cp312-win_amd64.whl (10.9 MB)
----- 10.9/10.9 MB 3.0 MB/s eta 0:00:00
Downloading joblib-1.4.2-py3-none-any.whl (301 kB)
Using cached scipy-1.14.0-cp312-cp312-win_amd64.whl (44.5 MB)
Downloading threadpoolctl-3.5.0-py3-none-any.whl (18 kB)
Installing collected packages: threadpoolctl, scipy, joblib, scikit-learn
Successfully installed joblib-1.4.2 scikit-learn-1.5.1 scipy-1.14.0 threadpoolctl-3.5.0
```

12. Kemudian anda harus ketik di command prompt “pip install numpy”

```
C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install numpy
Requirement already satisfied: numpy in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (2.0.1)
```

13. Kemudian anda harus ketik di command prompt “pip install scipy”

```
C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install scipy
Requirement already satisfied: scipy in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (1.14.0)
Requirement already satisfied: numpy<2.3,>=1.23.5 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from scipy) (2.0.1)
```

14. Kemudian anda harus ketik di command prompt “pip install matplotlib”

```
Administrator: Command Prompt

C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install matplotlib
Collecting matplotlib
  Downloading matplotlib-3.9.1.post1-cp312-cp312-win_amd64.whl.metadata (11 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.2.1-cp312-cp312-win_amd64.whl.metadata (5.8 kB)
Collecting cycler>=0.10 (from matplotlib)
  Downloading cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloading fonttools-4.53.1-cp312-cp312-win_amd64.whl.metadata (165 kB)
Collecting kiwisolver>=1.3.1 (from matplotlib)
  Downloading kiwisolver-1.4.5-cp312-cp312-win_amd64.whl.metadata (6.5 kB)
Requirement already satisfied: numpy>=1.23 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from matplotlib) (2.0.1)
Requirement already satisfied: packaging>=20.0 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from matplotlib) (24.1)
Requirement already satisfied: pillow>=8 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from matplotlib) (10.4.0)
Collecting pyparsing>=2.3.1 (from matplotlib)
  Downloading pyparsing-3.1.2-py3-none-any.whl.metadata (5.1 kB)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from matplotlib) (2.9.0.post0)
Requirement already satisfied: six>=1.5 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
Downloading matplotlib-3.9.1.post1-cp312-cp312-win_amd64.whl (8.0 MB)
----- 8.0/8.0 MB 1.6 MB/s eta 0:00:00
Downloading contourpy-1.2.1-cp312-cp312-win_amd64.whl (189 kB)
Downloading cycler-0.12.1-py3-none-any.whl (8.3 kB)
Downloading fonttools-4.53.1-cp312-cp312-win_amd64.whl (2.2 MB)
----- 2.2/2.2 MB 1.1 MB/s eta 0:00:00
```

15. Kemudian anda harus ketik di command prompt “pip install streamlit”

```
C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>pip install pandas
Requirement already satisfied: pandas in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (2.2.2)
Requirement already satisfied: numpy>=1.26.0 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from pandas) (2.0.1)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from pandas) (2024.1)
Requirement already satisfied: tzdata>=2022.7 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from pandas) (2024.1)
Requirement already satisfied: six>=1.5 in c:\users\win10\appdata\local\programs\python\python312\lib\site-packages (from python-dateutil>=2.8.2->pandas) (1.16.0)
```

16. kemudian ketik “streamlit run app.py”, jika muncul tampilan seperti dibawah ini masukkan email anda.

```
C:\Users\Win10\Documents\Website Identifikasi Pencemaran Udara>streamlit run app.py

Welcome to Streamlit!

If you'd like to receive helpful onboarding emails, news, offers, promotions,
and the occasional swag, please enter your email address below. Otherwise,
leave this field blank.

Email: 
```

17. kemudian akan muncul local url seperti <http://localhost:8501>.

```
C:\Windows\system32\cmd.exe - streamlit run app.py
Microsoft Windows [Version 10.0.19045.4651]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lenovo>cd \Users\lenovo\Documents\Website Identifikasi Pencemaran Udara
C:\Users\lenovo\Documents\Website Identifikasi Pencemaran Udara>streamlit run app.py

You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501
Network URL: http://192.168.43.53:8501
```

18. kemudian di copy di chrome maka akan muncul tampilan seperti dibawah ini. Maka instalasi aplikasi telah selesai.



19. Jika muncul tampilan seperti di bawah ini pilih “Allow access” agar aplikasi dapat berjalan.

