



Export Activity Overview



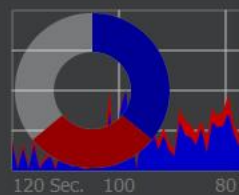
Settings



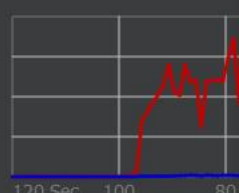
Discard Show



## CPU Load

Guest Load: 28%  
VMM Load: 36%

## Network Rate

Receive Rate: 0 B  
Total Received: 1.18 GB  
Transmit Rate: 0 B  
Total Transmitted: 10.91 MB

## Disk IO Rate

Write Rate: 0 B  
Total Written: 10.73 GBNew folder  
(3)

VirtualBox...

Oracle VM  
VirtualBox

Jul 15 00:20

## Visual Studio Code

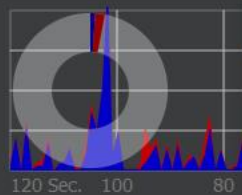
File Edit Selection View Go Run Terminal Help







## CPU Load

Guest Load: 2%  
VMM Load: 1%

## Network Rate

Receive Rate: 0 B  
Total Received: 1.18 GB  
Transmit Rate: 0 B  
Total Transmitted: 10.68 MB

## Disk IO Rate

Write Rate: 0 B  
Total Written: 10.67 GBNew folder  
(3)

VirtualBox-...

Oracle VM  
VirtualBox

Jul 15 00:20

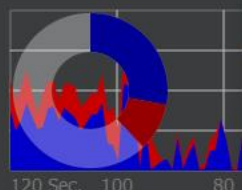
```
simeon@simeon: ~  
Setting up gcc-13-x86-64-linux-gnu (13.2.0-23ubuntu4) .  
..  
Setting up binutils (2.42-4ubuntu2) ...  
Setting up dpkg-dev (1.22.6ubuntu6) ...  
Setting up python3-dev (3.12.3-0ubuntu1) ...  
Setting up gcc-13 (13.2.0-23ubuntu4) ...  
Setting up g++-13-x86-64-linux-gnu (13.2.0-23ubuntu4) .  
..  
Setting up gcc-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...  
Setting up gcc (4:13.2.0-7ubuntu1) ...  
Setting up g++-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...  
Setting up g++-13 (13.2.0-23ubuntu4) ...  
Setting up g++ (4:13.2.0-7ubuntu1) ...  
update-alternatives: using /usr/bin/g++ to provide /usr  
/bin/c++ (c++) in auto mode  
Setting up build-essential (12.10ubuntu1) ...  
Processing triggers for man-db (2.12.0-4build2) ...  
Processing triggers for libc-bin (2.39-0ubuntu8.2) ...  
simeon@simeon:~$ python3 --version  
Python 3.12.3  
simeon@simeon:~$ pip --version  
pip 24.0 from /usr/lib/python3/dist-packages/pip (pytho  
n 3.12)  
simeon@simeon:~$
```



Home



## CPU Load

Guest Load: 100%  
VMM Load: 28%

120 Sec. 100 80

## Network Rate

Receive Rate: 0 B  
Total Received: 1.18 GB  
Transmit Rate: 0 B  
Total Transmitted: 10.93 MB

120 Sec. 100 80

## Disk IO Rate

Write Rate: 0 B  
Total Written: 10.76 GB

120 Sec. 100 80

New folder  
(3)

VirtualBox-...

Oracle VM  
VirtualBox

ubuntu [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Jul 15 00:21

```
simeon@simeon: ~/Microservices
update-alternatives: using /usr/bin/g++ to provide /usr
/bin/c++ (c++) in auto mode
Setting up build-essential (12.10ubuntu1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.2) ...
simeon@simeon:~$ python3 --version
Python 3.12.3
simeon@simeon:~$ pip --version
pip 24.0 from /usr/lib/python3/dist-packages/pip (pytho
n 3.12)
simeon@simeon:~$ code
simeon@simeon:~$ git clone https://github.com/Vikas0987
66/Microservices.git
Cloning into 'Microservices'...
remote: Enumerating objects: 95, done.
remote: Total 95 (delta 0), reused 0 (delta 0), pack-re
used 95
Receiving objects: 100% (95/95), 96.20 KiB | 1.09 MiB/s
, done.
Resolving deltas: 100% (28/28), done.
simeon@simeon:~$ cd Microservices
simeon@simeon:~/Microservices$ python3.10 -m venv venv
simeon@simeon:~/Microservices$ source venv/bin/activate
(venv) simeon@simeon:~/Microservices$
```



Home





Export



Activity Overview



Settings



Discard



Show



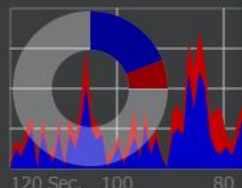
ubuntu

Running

## CPU Load

Guest Load: 6%

VMM Load: 19%



## Network Rate

Receive Rate: 0 B

Total Received: 1.30 GB

Transmit Rate: 0 B

Total Transmitted: 14.24 MB



## Disk IO Rate

Write Rate: 0 B

Total Written: 11.67 GB

New folder  
(3)

VirtualBox-...

Oracle VM  
VirtualBox

ubuntu [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Jul 15 00:34



```
simeon@simeon: ~/Microservices/code...  
File "/home/simeon/Microservices/code_model_training/train.py", line 57, in <module>  
    joblib.dump(pipe, gzip.open('model/model_binary.dat.gz', "wb"))  
File "/usr/lib/python3.10/gzip.py", line 58, in open  
    binary_file = GzipFile(filename, gz_mode, compresslevel)  
File "/usr/lib/python3.10/gzip.py", line 174, in __init_  
    fileobj = self.myfileobj = builtins.open(filename, mode or 'rb')  
FileNotFoundError: [Errno 2] No such file or directory: 'model/model_binary.dat.gz'  
(venv) simeon@simeon:~/Microservices/code_model_training  
$ python train.py  
Accuracy: 0.9736842105263158  
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixD  
isplay object at 0x73fa4f9d50f0>  
/home/simeon/Microservices/code_model_training/train.py:  
54: UserWarning: Matplotlib is currently using agg, which  
is a non-GUI backend, so cannot show the figure.  
    plt.show()  
(venv) simeon@simeon:~/Microservices/code_model_training  
$
```



&gt; OUTLINE

&gt; TIMELINE



main\* 0 0 0 0 0

py - Microservices - Visual Studio Code

```
def predict():  
    if not feature_dict:  
        return {}, 500  
  
    try:  
        response = get_model_response(feature_dict)  
    except ValueError as e:  
        return {'error': str(e).split('\n')[-1].strip()}, 500  
  
    return response, 200  
  
__name__ == '__main__':  
    app.run(host='0.0.0.0')
```

Ln 1, Col 1 Spaces: 4 UTF-8 CRLF Python



Home

Right Ctrl

Tools

Export Activity Overview Settings Discard Show

**ubuntu** Running

**CPU Load**  
Guest Load: 25%  
VMM Load: 40%

**Network Rate**  
Receive Rate: 0 B  
Total Received: 1.52 GB  
Transmit Rate: 0 B  
Total Transmitted: 17.15 MB

**Disk IO Rate**  
Write Rate: 0 B  
Total Written: 14.67 GB



Jul 15 01:02

```
simeon@simeon: ~/Microservices
Successfully built sklearn
Installing collected packages: pytz, Werkzeug, threadpoolctl, six, pyparsing, Pillow, numpy, MarkupSafe, kiwisolver, joblib, itsdangerous, gunicorn, fonttools, cyclr, click, scipy, python-dateutil, packaging, Jinja2, scikit-learn, pandas, matplotlib, Flask, sklearn
Successfully installed Flask-2.0.2 Jinja2-3.0.3 MarkupSafe-2.0.1 Pillow-9.0.0 Werkzeug-2.0.2 click-8.0.3 cyclr-0.11.0 fonttools-4.28.5 gunicorn-20.1.0 itsdangerous-2.0.1 joblib-1.1.0 kiwisolver-1.3.2 matplotlib-3.5.1 numpy-1.22.0 packaging-21.3 pandas-1.3.5 pyparsing-3.0.6 python-dateutil-2.8.2 pytz-2021.3 scikit-learn-1.0.2 scipy-1.7.3 six-1.16.0 sklearn-0.0 threadpoolctl-3.0.0
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv

[notice] A new release of pip is available: 23.0.1 -> 24.1.2
[notice] To update, run: pip install --upgrade pip
--> 0e1813112291
STEP 5/7: COPY . .
█
```

Microservices - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- MICROSERVICES
  - > \_\_pycache\_\_
  - > .vscode
  - > code\_model\_training
  - > data
  - > model
  - > ms
    - > \_\_pycache\_\_
    - > \_\_init\_\_.py
    - > functions.py
  - > tests
    - > example\_calls.txt
  - > venv
    - > app.py
    - > Dockerfile
    - > README.md
    - > requirements.txt
- OUTLINE
- TIMELINE

main\*



Home





ubuntu [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Jul 15 02:07

example\_calls.txt - Microservices - Visual Studio Code

File Edit Selection View Go Run Terminal Help

example\_calls.txt x

```
tests > example_calls.txt
1 # POST method predict
2 curl -d '{"radius_mean": 17.99, "texture_mean": 17.99}' \
3   -H "Content-Type: application/json" \
4   -X POST http://0.0.0.0:5000/predict
```

localhost:5000/info

localhost:5000/info

JSON Raw Data Headers

Save Copy Collapse All Expand All Filter JSON

```
name: "Breast Cancer Wisconsin (Diagnostic)"
version: "v1.0.0"
```

simeon@simeon: ~/Microservices

```
simeon@simeon:~$ cd Microservices/
simeon@simeon:~/Microservices$ source venv/bin/activate
(venv) simeon@simeon:~/Microservices$ docker run -p 5000:5000 flask-ml-app
Emulate Docker CLI using podman. Create /etc/containers/nodocker to quiet msg.
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on all addresses.
  WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://10.0.2.100:5000/ (Press CTRL+C to quit)
10.0.2.100 - - [14/Jul/2024 20:36:58] "GET /info HTTP/1.1" 200 -
10.0.2.100 - - [14/Jul/2024 20:36:59] "GET /favicon.ico HTTP/1.1" 404 -
```



Tools

Export Activity Overview Settings Discard Show

**ubuntu** Running

**CPU Load**  
Guest Load: 19%  
VMM Load: 37%

**Network Rate**  
Receive Rate: 0 B  
Total Received: 1.05 MB  
Transmit Rate: 0 B  
Total Transmitted: 156.72 MB

**Disk IO Rate**  
Write Rate: 276.00 KB  
Total Written: 20.29 GB



Jul 15 01:53



```
simeon@simeon: ~/SimeonPalla-W11_...  
Writing objects: 97% (12024/12395), 123.47 MiB | 738.00  
Writing objects: 97% (12045/12395), 124.09 MiB | 764.00  
Writing objects: 97% (12051/12395), 125.20 MiB | 824.00  
Writing objects: 97% (12053/12395), 125.65 MiB | 688.00  
Writing objects: 97% (12054/12395), 125.65 MiB | 688.00  
Writing objects: 97% (12093/12395), 126.57 MiB | 564.00  
Writing objects: 97% (12093/12395), 126.70 MiB | 553.00  
Writing objects: 97% (12101/12395), 127.33 MiB | 569.00  
Writing objects: 97% (12107/12395), 128.16 MiB | 502.00  
Writing objects: 97% (12118/12395), 128.83 MiB | 582.00  
Writing objects: 97% (12132/12395), 130.81 MiB | 791.00  
Writing objects: 98% (12148/12395), 131.10 MiB | 821.00  
Writing objects: 98% (12174/12395), 131.10 MiB | 821.00  
Writing objects: 99% (12272/12395), 131.10 MiB | 821.00  
Writing objects: 100% (12395/12395), 131.69 MiB | 977.00  
Writing objects: 100% (12395/12395), 132.00 MiB | 635.00  
KiB/s, done.  
Total 12395 (delta 925), reused 0 (delta 0), pack-reused  
0  
remote: Resolving deltas: 100% (925/925), done.  
To https://github.com/simeonpalla/SimeonPalla-W11_Graded-  
Assignment.git  
c8d9135..3b4a62f main -> main  
simeon@simeon: ~/SimeonPalla-W11_Graded-Assignment$
```

Microservices - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- MICROSERVICES
  - \_\_pycache\_\_
  - .vscode
  - code\_model\_training
  - data
  - model
  - ms
    - \_\_pycache\_\_
    - \_\_init\_\_.py
    - functions.py
  - tests
    - example\_calls.txt
  - venv
  - app.py
  - Dockerfile
  - README.md
  - requirements.txt

OUTLINE

TIMELINE

Show All Commands Ctrl + Shift + P

Go to File Ctrl + P

Find in Files Ctrl + Shift + F

Toggle Full Screen F11

Show Settings Ctrl + ,



Home