**Amazon Linux2 Deployment instructions:**

1)Requirements-check if python version is **3.10** by running **python3 --version**

IF **NOT** install python 3.10 following these steps:

sudo yum update -y

sudo yum groupinstall "Development Tools" -y

sudo yum erase openssl-devel -y

sudo yum install openssl11 openssl11-devel libffi-devel bzip2-devel wget -y

sudo wget https://www.python.org/ftp/python/3.10.4/Python-3.10.4.tgz

sudo tar -xf Python-3.10.4.tgz

cd Python-3.10.4/

./configure --enable-optimizations

nproc

make -j $(nproc)

sudo make altinstall

sudo yum install python3-pip

sudo ln -sf /usr/local/bin/python3.10 /usr/bin/python3

sudo yum install httpd-devel python3-devel -y

sudo yum install httpd -y

2) Open a *new session* and copy files from s3 to ec2**(sudo aws s3 cp s3://**[nyl-nylimdatasci-qa-workspace](https://us-east-1.console.aws.amazon.com/s3/buckets/nyl-nylimdatasci-qa-workspace?region=us-east-1&bucketType=general)**/ai\_backend.zip /var/www/html/)**

3)Go back to the *old session* and complete rest of the steps

cd /var/www/html/

sudo unzip ai\_backend.zip

sudo git clone https://github.com/GrahamDumpleton/mod\_wsgi.git

cd mod\_wsgi

sudo ./configure

sudo make

sudo make install

sudo systemctl enable httpd

sudo systemctl start httpd

sudo systemctl status httpd(check if its active)

sudo httpd -t -D DUMP\_MODULES | grep wsgi

cd /var/www/html/ai\_backend

sudo pip3 install fastapi

sudo pip3 install uvicorn

sudo pip3 install pycryptodome==3.20.0

sudo pip3 install -r requirements.txt

**sudo pip3 install gunicorn**

cd /var/log/

sudo mkdir datascience

sudo chmod 777 /var/log/datascience

cd datascience

##create empty file for logging##

sudo nano response.log (Command +O,Enter,Command +X)

sudo chmod 777 /var/log/datascience/response.log

4)Set up the three configuration files

a)sudo nano /etc/httpd/conf.modules.d/00-base.conf

*Add the below line to the end of the file:*

LoadModule wsgi\_module modules/mod\_wsgi.so

b)**cd /var/www/html**

sudo nano summarizer\_app.wsgi

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*Add the below code to the file:*

import sys

sys.path.insert(0, '/var/www/html')

# Import your FastAPI application instance

from main import app as application

c)sudo nano /etc/httpd/conf.d/fastapi.conf

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*Add the below code to the file but change the server name to point to the* ***ip*** *of the instance(important)*

<VirtualHost \*:80>

ServerName **10.195.176.87**

WSGIDaemonProcess fastapi\_app user=apache group=apache threads=5

WSGIScriptAlias / /var/www/html/summarizer\_app.wsgi

<Directory /var/www/html/ai\_backend>

WSGIProcessGroup fastapi\_app

WSGIApplicationGroup %{GLOBAL}

Require all granted

</Directory>

ErrorLog /var/log/httpd/fastapi\_error.log

CustomLog /var/log/httpd/fastapi\_access.log combined

</VirtualHost>

5)sudo systemctl restart httpd

6)Run the below command to start the server (pwd to check if path is /var/www/html/ai\_backend)

cd /var/www/html/ai\_backend

1)For testing

uvicorn api\_util:app --host 0.0.0.0 --port 8000

2)For production

gunicorn --workers=2 -b 0.0.0.0:8000 --timeout=1000 -k uvicorn.workers.UvicornWorker api\_util:app --daemon