

AIMA CODE INSTALLATION

INSTRUCTIONS - WITH DOCKER ON LINUX

The following two steps are required to set up a programming environment that allows you to execute the *Jupyter Notebooks*:

1. Installation of *Docker Desktop*
2. Download of the *aitum/aidocker* image

1 Installation of Docker

We recommend installing docker by downloading **the repository for Docker**. This can be done by opening a console and typing the following commands:

1. `sudo apt-get update`
2. `sudo apt-get install ca-certificates curl gnupg lsb-release`

If you get the following error:

```
osboxes@osboxes:~$ sudo apt-get install \
ca-certificates \
curl \
gnupg \
lsb-release
E: Could not get lock /var/lib/dpkg/lock-frontent. It is held by process 5878 (unattended-upgr)
N: Be aware that removing the lock file is not a solution and may break your system.
E: Unable to acquire the dpkg frontend lock (/var/lib/dpkg/lock-frontent), is another process using it?
```

You can just kill the process and move on (in this case, the process is 5878, check which process you have in the error message):

```
sudo kill 5878
```

3. `sudo mkdir -p /etc/apt/keyrings`
4. `curl -fsSL https://download.docker.com/linux/ubuntu/gpg \`
`| sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg`
5. `echo "deb [arch=$(dpkg --print-architecture) \`
`signed-by=/etc/apt/keyrings/docker.gpg] \`
`https://download.docker.com/linux/ubuntu \`
`$(lsb_release -cs) stable" \`
`| sudo tee /etc/apt/sources.list.d/docker.list > /dev/null`
6. `sudo apt-get update`
7. `sudo apt-get install docker-ce docker-ce-cli \`
`containerd.io docker-compose-plugin`

2 Download of the aitum/aidocker image

Open the Terminal and write the following commands

1. `sudo docker pull aitum/aidocker`
(This will take a while)
2. `mkdir ~/homework`
(creates a homework folder to put the homeworks)
3. `sudo docker run -d --restart unless-stopped -p 8888:8888 \`
`-v ~/homework:/work/homework -v /var/lib/docker:/docker \`
`--name aitum aitum/aidocker`
4. Go to `http://localhost:8888/` with your browser

You just need to run these commands one time. Then, every time you want to work on docker, you can just go to `http://localhost:8888/`. You will find all the notebooks of the lecture in the root folder (they end with `.ipynb`), and you can add your own notebooks and/or the homework assignments in the homework folder that is available to you locally in your home folder, and then navigate to the homework folder displayed when you open `http://localhost:8888/tree/homework`.

3 Stopping or Removing the Docker Container

If you plan to use Jupyter Notebooks for another lecture, you might want to stop the container by typing the following command in a console:

```
sudo docker stop aitum
```

You can then restart the container at your leisure using the command

```
sudo docker start aitum
```

In case you need to completely remove the container, you first need to stop it:

```
sudo docker stop aitum
```

You can then remove the container:

```
sudo docker rm aitum
```