**Docker Installation**

for windows:

1. Download the setup & install

for Ubuntu

sudo apt-get update

sudo apt-get install docker.io

**Common Docker Operations**

1. **docker - - version**
2. **sudo docker pull ubuntu** // download docker-image
3. **sudo docker images** // view the list of images
4. **sudo docker run –it -d** {image-name} // run the docker container

-it for make the container interactive

-d : daemon for running the container in background

v) **docker ps** // view all the currently running docker

vi) **sudo docker ps –a** // it shows all the running & stopped docker list

vi) **sudo docker stop** {running docker id} // to stop the docker

vii) **sudo docker –it exec** {running docker id} **bash**

‘bash’ is used to run the docker in the current terminal

Pull an image of the [Ubuntu OS](https://hub.docker.com/r/_/ubuntu/) and run an interactive terminal inside the spawned container:

> docker run --interactive --tty ubuntu bash

Or **docker run –name MyUbuntu1 -it Ubuntu**

**Run an existing container. Existing container can be viewed by: docker ps –a**

**Use Existing Container**

**docker start ef7b780c1a80**

**docker attach ef7b780c1a80**

**or**

**docker start c303c6e03484**

**docker exec -it c303c6e03484 bash**

viii) **exit** // to exit from the running container

ix) **sudo docker stop** {container-id} // to stop the running docker container

x) **sudo docker kill** {container-id} // to kill the docker container, if it is unresponsive

xi) **sudo docker rm** {container-id} // to delete a docker container

to delete a running docker: **sudo docker rm –f** {container-id}

xii) **sudo docker rmi** {docker image id} // remove the docker image from the system

\*\* you can get the docker image id from “**sudo docker images**” command

xiii) to change the name of the container: **docker rename** {container\_id} {new\_name}

One liner to stop / remove all of [Docker](http://www.docker.io/) containers:

docker stop $(docker ps -a -q)

docker rm $(docker ps -a -q)

**DOCKER HUB**

1. Navigate to <https://hub.docker.com>
2. Sign-in/register with your email.
3. **docker commit** <container-id> <name-for-image>: With this command, a new image is created which can be under docker images with the same name as passed in the command

Example: docker commit {container-id} new

1. to push the docker image into your web-account:

sudo docker commit {container-id} userid/{container image name}

sudo docker run –it –p 82:80 –d userid/{container image name}

-p: for port mapping

c) sudo docker login

d) after successful login:

sudo docker push hshar/apache

Run the docker without Sudo:

sudo usermode –aG docker $USER

then right-click to re-login to enter into the same session.

**JUPYTER NOTEBOOK WITH PYTHON, R AND JULIA**

1. To install Jupyter Notebook in Docker:

**docker pull jupyter/datascience-notebook**

1. To run existing container of jupyter notebook

**docker run -it -p 8888:8888 jupyter/datascience-notebook**

1. Run Jupyter Notebook with different local volume

**docker run -it -p 8888:8888 -v F:/Amit\_PERSONAL-DATA/DockerData/DataScience/Python:/home/jovyan jupyter/datascience-notebook**