

ESCMID Global Machine learning workshop 2025: Installing Orange – Ubuntu

Last updated 25/02/2024

This document outlines how to install Orange on an Ubuntu system. If you go to the Orange data mining software download link (<https://orangedatamining.com/download/>), you will see instructions for downloading Orange for “Other platforms”. This is shown below.

Other platforms

Anaconda

Create and activate a conda environment for Orange (optional, but recommended)

```
conda create python=3.10 --yes --name orange3
conda activate orange3
```

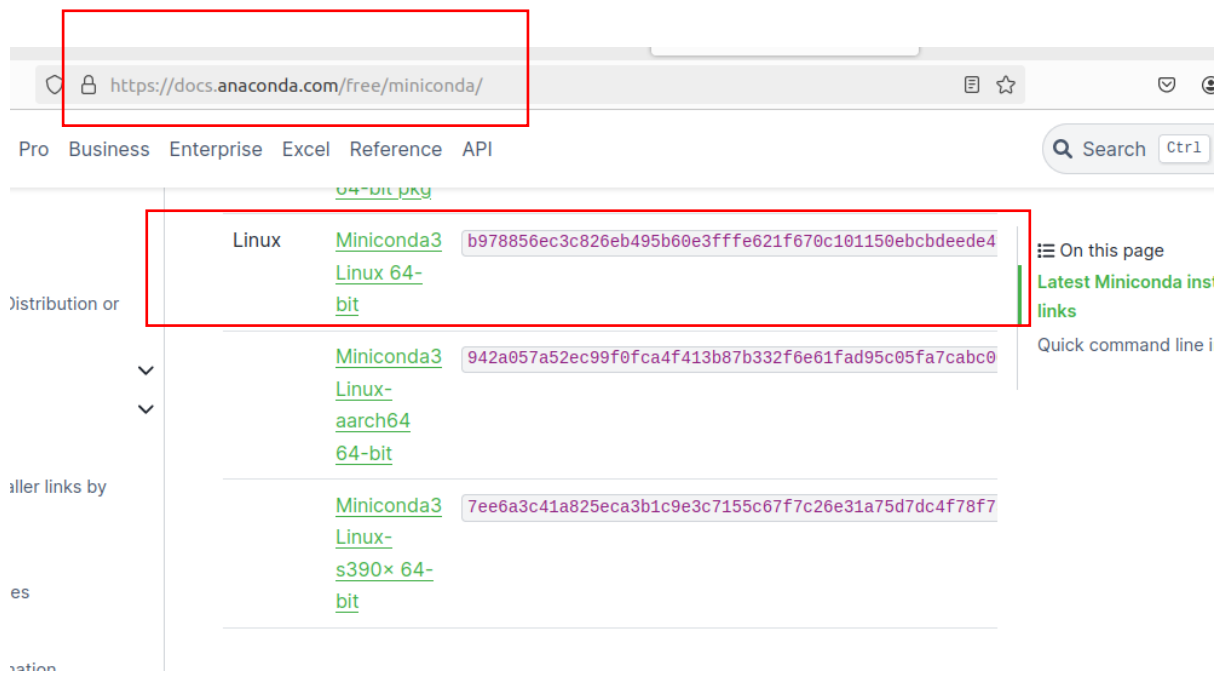
Add conda-forge to the list of channels you can install packages from (and make it default)

```
conda config --add channels conda-forge
conda config --set channel_priority strict
```

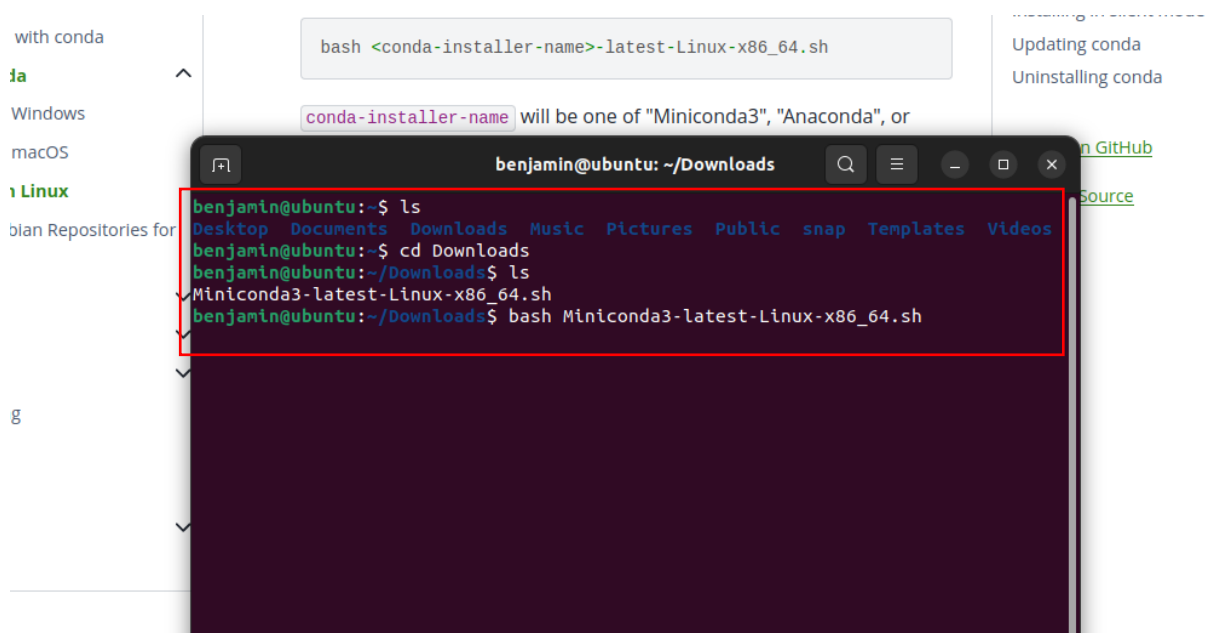
and run

```
conda install orange3
```

Do download Orange, you should first install Conda on our system. This can be done by going to the website shown in the next image. Downloading the first Linux “Miniconda3 Linux 64-bit” file should work.



Once downloaded, you can navigate to the downloads folder via the terminal. You can then run the command shown in the image below



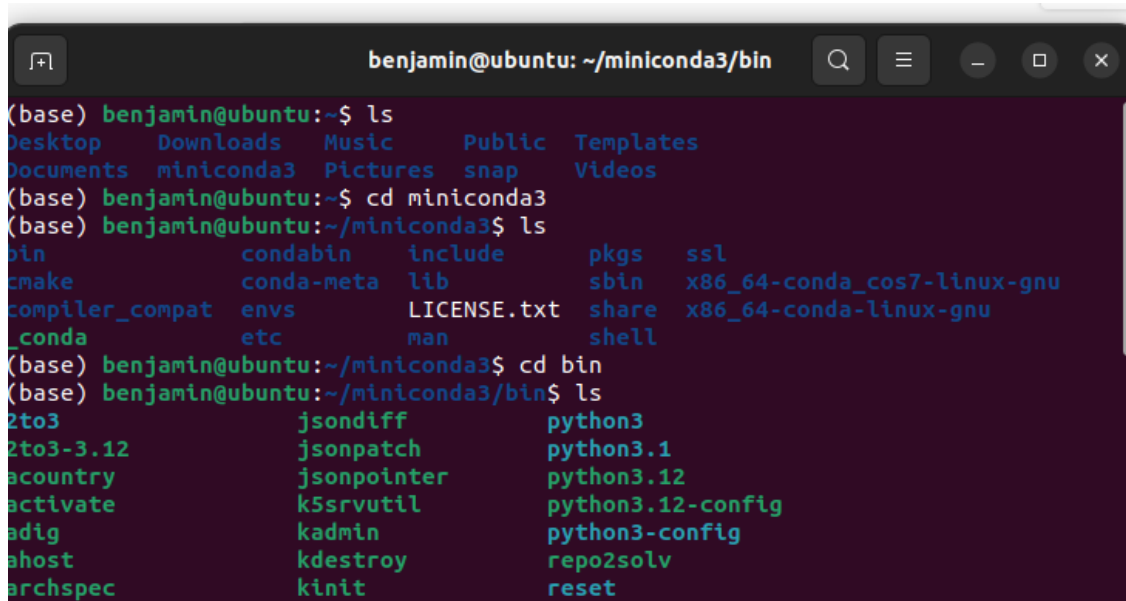
After it finishes installing, the terminal will look like the below image.

```
You can undo this by running `conda init --reverse $SHELL`? [yes|no]
[no] >>>
for You have chosen to not have conda modify your shell scripts at all.
To activate conda's base environment in your current shell session:
eval "$(/home/benjamin/miniconda3/bin/conda shell.YOUR_SHELL_NAME hook)"
To install conda's shell functions for easier access, first activate, then:
conda init
Thank you for installing Miniconda3!
benjamin@ubuntu:~/Downloads$
Using with fish shell
```

Close the terminal and reopen a new terminal.

```
benjamin@ubuntu: ~
(base) benjamin@ubuntu:~$ ls
Desktop  Downloads  Music      Public    Templates
Documents miniconda3 Pictures    snap      Videos
(base) benjamin@ubuntu:~$
```

Next, we want to navigate to the miniconda3 directory and then navigate to the bin directory. This is shown in the image below.

A terminal window titled 'benjamin@ubuntu: ~/miniconda3/bin' with standard window controls. The terminal shows the following commands and output:

```
(base) benjamin@ubuntu:~$ ls
Desktop  Downloads  Music      Public    Templates
Documents miniconda3 Pictures   snap      Videos
(base) benjamin@ubuntu:~$ cd miniconda3
(base) benjamin@ubuntu:~/miniconda3$ ls
bin          condabin    include     pkgs       ssl
cmake        conda-meta  lib         sbin       x86_64-conda_cos7-linux-gnu
compiler_compat envs        LICENSE.txt share      x86_64-conda-linux-gnu
conda        etc         man         shell
(base) benjamin@ubuntu:~/miniconda3$ cd bin
(base) benjamin@ubuntu:~/miniconda3/bin$ ls
2to3          jsdiff      python3
2to3-3.12     jsonpatch  python3.1
acountry      jsonpointer python3.12
activate      k5srvutil  python3.12-config
adig          kadmin     python3-config
ahost         kdestroy   repo2solv
archspec      kinit      reset
```

Continued on next page

Next, we can run the “nano ~/.bashrc” command

```
you should see “conda” amongst the list

benjamin@ubuntu: ~/miniconda3/bin
(base) benjamin@ubuntu:~/miniconda3/bin$ nano ~/.bashrc
```

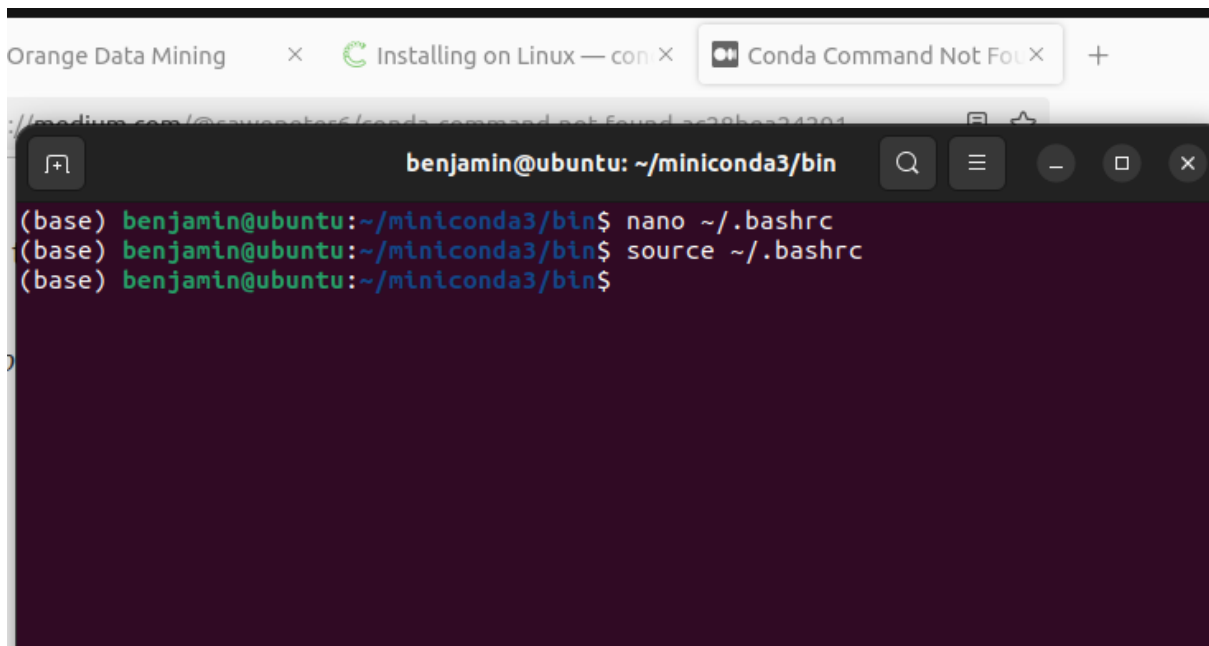
After running the command, the terminal should look like / similar to the image below. Use the down arrow to navigate to the bottom of the file and add the line “export PATH=~/miniconda3/bin:\$PATH” as shown in the image below

```
if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi
export PATH=~/miniconda3/bin:$PATH
```

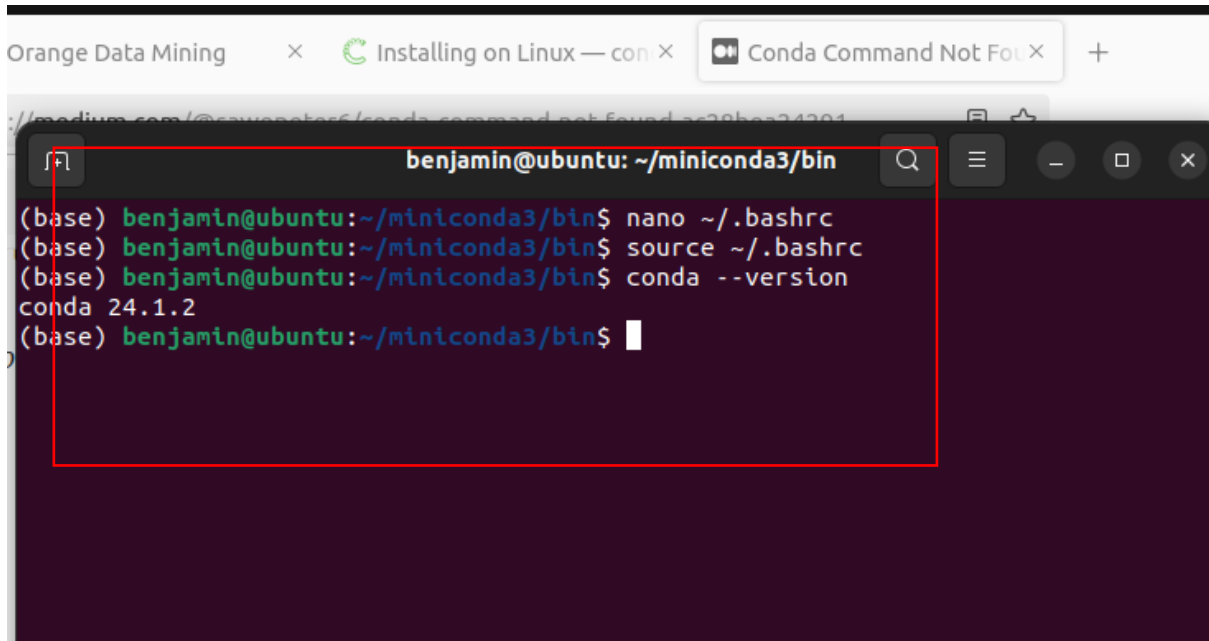
nano ~/.bashrc

Press “ctrl s” to save and then “ctrl x” to exit. You will see the terminal again. On the next line, run the command “source ~/.bashrc”. This is shown in the image below.

A screenshot of a terminal window titled 'benjamin@ubuntu: ~/miniconda3/bin'. The terminal shows three lines of commands and their prompts: '(base) benjamin@ubuntu:~/miniconda3/bin\$ nano ~/.bashrc', '(base) benjamin@ubuntu:~/miniconda3/bin\$ source ~/.bashrc', and '(base) benjamin@ubuntu:~/miniconda3/bin\$'. The terminal background is dark purple. Above the terminal, a browser window is visible with tabs for 'Orange Data Mining', 'Installing on Linux — con', and 'Conda Command Not Fou'. The address bar shows a URL from medium.com.

Continued on next page

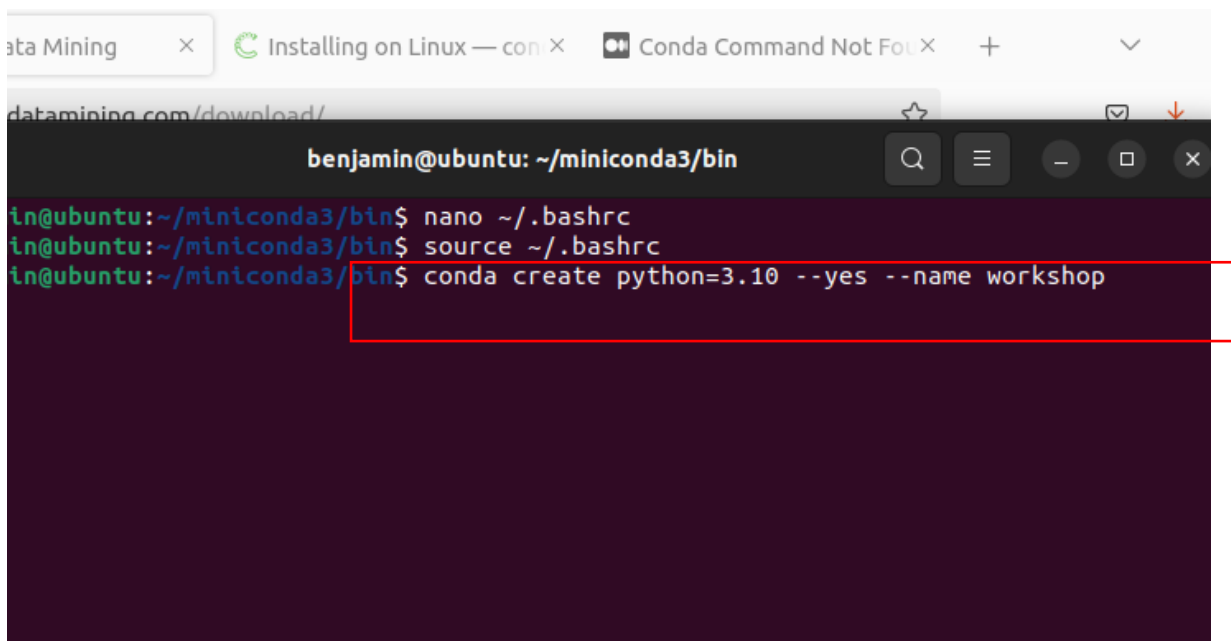
You can run the “conda --version” command to check if the installation worked correctly. This is shown below.

A terminal window titled "benjamin@ubuntu: ~/miniconda3/bin" is shown. The window has a dark purple background. The terminal text is as follows:

```
(base) benjamin@ubuntu:~/miniconda3/bin$ nano ~/.bashrc
(base) benjamin@ubuntu:~/miniconda3/bin$ source ~/.bashrc
(base) benjamin@ubuntu:~/miniconda3/bin$ conda --version
conda 24.1.2
(base) benjamin@ubuntu:~/miniconda3/bin$
```

A red rectangular box highlights the first four lines of the terminal output, from the first prompt to the version output.

Next, we want to create a virtual environment. We can do this by running the command “conda create python=3.10 --yes --name workshop”. This is shown below, and create an environment called “workshop”.

A terminal window titled "benjamin@ubuntu: ~/miniconda3/bin" is shown. The window has a dark purple background. The terminal text is as follows:

```
in@ubuntu:~/miniconda3/bin$ nano ~/.bashrc
in@ubuntu:~/miniconda3/bin$ source ~/.bashrc
in@ubuntu:~/miniconda3/bin$ conda create python=3.10 --yes --name workshop
```

A red rectangular box highlights the last line of the terminal output, which is the command to create the environment.

After running the command. You should see the following in your terminal.

```
tzdata      conda-forge/noarch::tzdata-2024a-h0c530f3_0
wheel       conda-forge/noarch::wheel-0.43.0-pyhd8ed1ab_1
xz          conda-forge/linux-64::xz-5.2.6-h166bdaf_0

Downloading and Extracting Packages:
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate workshop
#
# To deactivate an active environment, use
#
#     $ conda deactivate
(base) benjamin@ubuntu:~/miniconda3/bin$
```

Next, we can activate this environment. Do this by running the command “conda activate workshop”. Then, if the left of the terminal has changed from “(base)” to “(workshop)”, it has worked. Next, you can run two more commands, as shown in the image below.

```
# To activate this environment, use
#
#     $ conda activate workshop
#
# To deactivate an active environment, use
#
#     $ conda deactivate
(base) benjamin@ubuntu:~/miniconda3/bin$ conda activate workshop
(workshop) benjamin@ubuntu:~/miniconda3/bin$ conda config --add channels conda-forge
Warning: 'conda-forge' already in 'channels' list, moving to the top
(workshop) benjamin@ubuntu:~/miniconda3/bin$ conda config --set channel_priority strict
(workshop) benjamin@ubuntu:~/miniconda3/bin$
(workshop) benjamin@ubuntu:~/miniconda3/bin$
```


Next, install Orange by running the “conda install orange3” command.

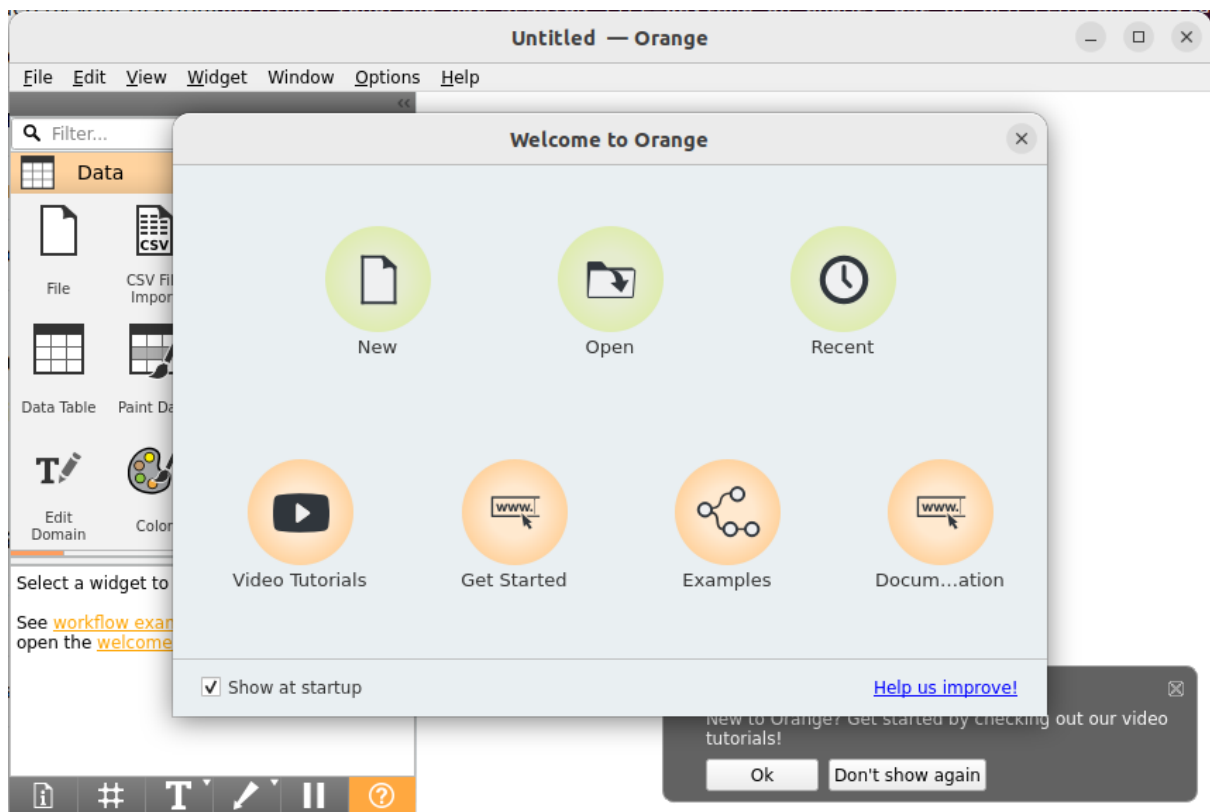
```
#  
# $ conda deactivate  
  
(base) benjamin@ubuntu:~/miniconda3/bin$ conda activate workshop  
(workshop) benjamin@ubuntu:~/miniconda3/bin$ conda config --add channels conda-forge  
Warning: 'conda-forge' already in 'channels' list, moving to the top  
(workshop) benjamin@ubuntu:~/miniconda3/bin$ conda config --set channel_priority strict  
(workshop) benjamin@ubuntu:~/miniconda3/bin$  
(workshop) benjamin@ubuntu:~/miniconda3/bin$ conda install orange3  
Channels:  
- conda-forge  
- defaults  
Platform: linux-64  
Collecting package metadata (repodata.json): \ |
```

Finally, after the installation is complete, run the command below.

```
benjamin@ubuntu: ~/miniconda3/bin  
(workshop) benjamin@ubuntu:~/miniconda3/bin$ python -m Orange.canvas
```

Continued on the page

After running the previous command, you should see the following Orange graphical user interface.



After all this is complete, next time you want to open orange, you can just use the following commands when opening a new terminal.

```
benjamin@ubuntu: ~  
(base) benjamin@ubuntu:~$ conda activate workshop  
(workshop) benjamin@ubuntu:~$ python -m Orange.canvas
```