

Preparing for the TDA tutorial

Tutorial introducing you to TDA

Next Monday, Yueqi and I will organize the tutorial on TDA that should last around 2h-2h30. It consists in two complementary resources, a beamer presentation introducing you to the main concepts and a Jupyter notebook in Python, featuring two important TDA packages `gudhi` and `giotto-tda`. The tutorial will be segmented into 4 sections in a progressive order.

Installation instructions

- Install [Anaconda](#). It should take some time but once it's done it's much easier to install anything else.
- Launch the Anaconda terminal and there, use the following commands:
 - Install [Jupyter Lab](#) using `conda install -c conda-forge jupyterlab` (type y when prompted to accept the installation)
 - Install [giotto-tda](#) using `python -m pip install -U giotto-tda`
 - Install [gudhi](#) using `conda install -c conda-forge gudhi` (type y when prompted to accept the installation)
 - This will automatically install other packages as well, including `numpy`, `matplotlib` and `scipy`.

Testing instructions

- Download the attached draft Jupyter notebook called `Tutorial_testing.ipynb` and put in a dedicated folder (the final version will contain a few more cells).
- Launch the Anaconda terminal.
- There, type `jupyter lab`. Navigate to the dedicated folder through the web browser interface that opens automatically.
- You should be able to see a table of contents on the left pane and be able to navigate easily from section to section (see image below).
- In the **Run** panel, select **Run All cells**.
- Go to the very last cell of the notebook and check that it prints out the message `'Good! Every cell has been run correctly.'` (see image below).
- We are not 100% sure that these instructions are enough to make the notebook work: thus, if you are not able to see the last message and have instead a missing package error, please install it using `conda` by looking for the package on [conda-forge](#).

Office hour to help you

If you are desperate and nothing you tried solved the problem, we are available during an office hour on **Friday 07/01/2022** afternoon 1PM London = 2PM Munich = 3PM Helsinki via Zoom :

<https://crick.zoom.us/j/69986370114?pwd=UjFVZkhiN2RZN0ZuQWlYTzEvNEFXZz09>

Meeting ID: 699 8637 0114

Passcode: 380048

If this office hour is not suitable for everyone, please write to us at y.cao21@imperial.ac.uk and a.song19@imperial.ac.uk.

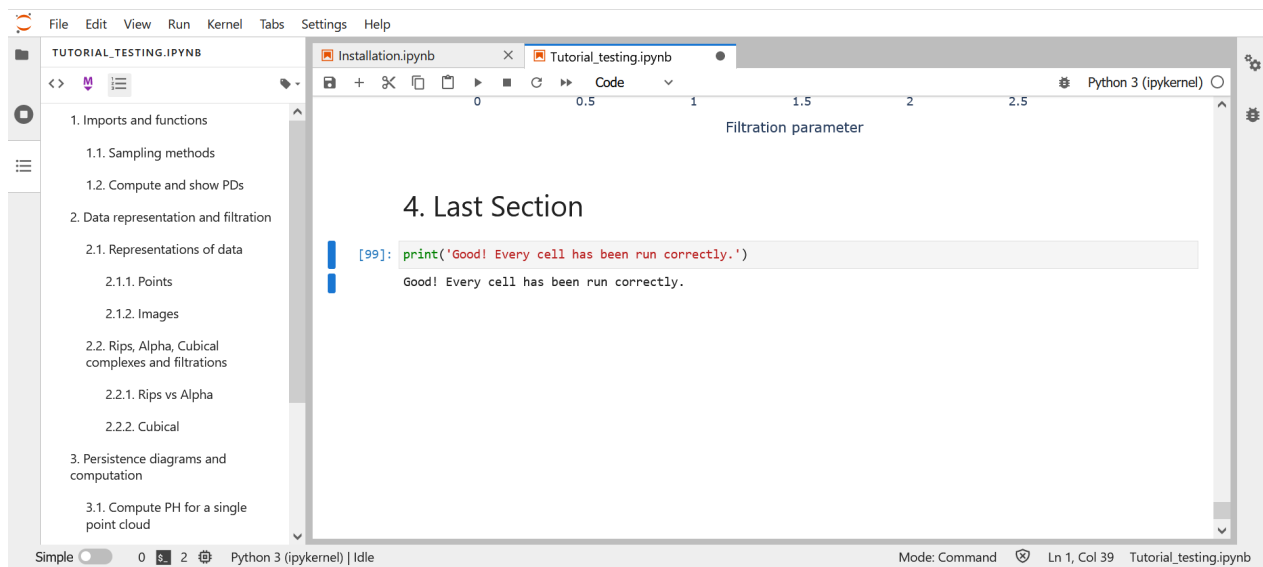


Figure 1: Success