


You can use PolyTrend in multiple ways:

- 1) Python script + Google Earth Engine data for an area (polygon). Final result visualized on maps: https://github.com/OlaMag/PolyTrend/blob/master/PTEE_with%20maps.ipynb
- 2) Python script + Google Earth Engine data for one point (x, y coordinates):
https://github.com/OlaMag/PolyTrend/blob/master/PolyTrend_with_EE.ipynb
- 3) 3) Python script: <https://github.com/OlaMag/PolyTrend/blob/master/PolyTrend.py>
- 4) Web tool + your data on <http://polytrend.gis.lu.se/>
- 5) RStudio package + your data

Using PolyTrend on data from Google Earth Engine is easy and fast, however initially you will need to install a few tools. It might take up to an hour.


1. Sign up for Google Earth Engine access: <https://earthengine.google.com/signup>. The form is very short, and authorization takes a few hours up to a few days. You should get an email from Google confirming you are good to go.
2. Go to https://github.com/OlaMag/PolyTrend/blob/master/PTEE_with%20maps.ipynb download the code for PolyTrend.
3. Download Anaconda or Miniconda: <https://docs.anaconda.com/anaconda/install/> appropriate for your operating system. Install Anaconda following installation guidelines on the website. Mind that it requires 3GB of free disc space. Anaconda installs for you Python and Jupyter Notebook automatically.
4. Once installed, open Anaconda Prompt (Conda).
5. Inside Conda create new working environment. The default Python version for Anaconda 3 is 3.6. If you are using an older version of Anaconda, you might need to update your Python to version 3.x. In the command prompt type exactly:

```
conda create --name polytrend
```

 Anaconda Prompt

```
(base) C:\Users\Lenovo>conda create --name polytrend
```

6. Activate the environment. Type:
activate polytrend

 Anaconda Prompt

```
(base) C:\Users\Lenovo>activate polytrend
```

7. Inside the new environment install libraries needed to run PolyTrend and all its features.
Type:
conda install -c conda-forge earthengine-api
Press y when prompted.

```
Anaconda Prompt - conda create --name polytrend python=3.5

added / updated specs:
- python=3.5

The following packages will be downloaded:

package | build | size
-----|-----|-----
pip-10.0.1 | py35_0 | 1.8 MB
setuptools-40.2.0 | py35_0 | 597 KB
wincertstore-0.2 | py35hfbbdb8_0 | 13 KB
wheel-0.31.1 | py35_0 | 81 KB
certifi-2018.8.24 | py35_1 | 140 KB
python-3.5.6 | he025d50_0 | 18.2 MB
-----|-----|-----
Total: | 20.8 MB

The following NEW packages will be INSTALLED:

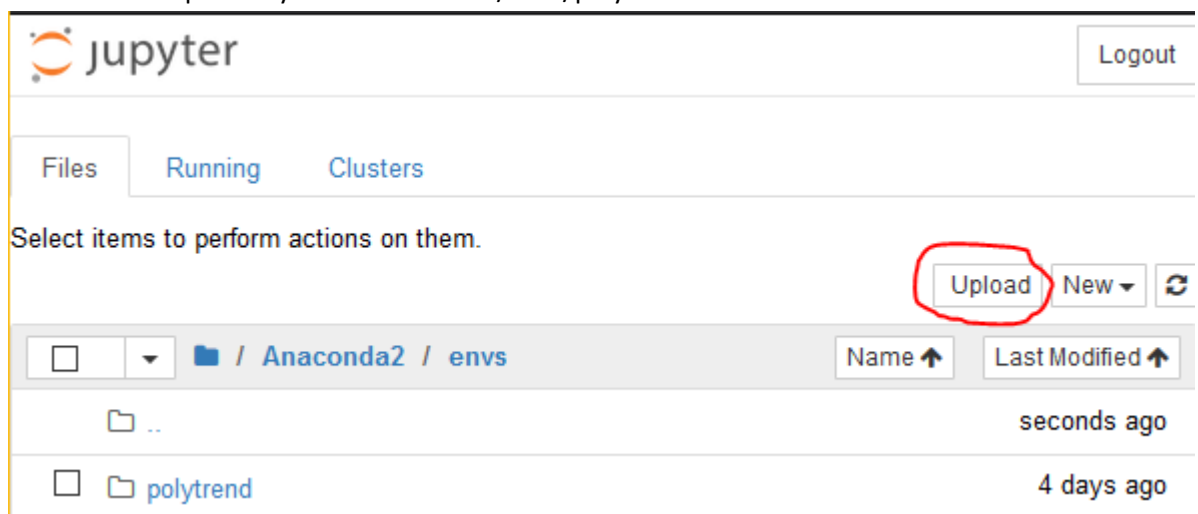
certifi: 2018.8.24-py35_1
pip: 10.0.1-py35_0
python: 3.5.6-he025d50_0
setuptools: 40.2.0-py35_0
vc: 14-h0510ff6_3
vs2015_runtime: 14.0.25123-3
wheel: 0.31.1-py35_0
wincertstore: 0.2-py35hfbbdb8_0

Proceed ([y]/n)?
```

8. Repeat the same process for other libraries:
conda install -c conda-forge ipyleaflet
9. Still in polytrend environment type:
earthengine authenticate
10. Wait for your default browser to open the authentication link. Follow instructions on the screen. Copy the resulting code and paste into conda when prompted.
11. Type:
jupyter notebook

```
(polytrend) C:\Users\Lenovo>jupyter notebook
```

Wait for the Jupyter notebook to open in your browser. Navigate to polytrend environment.
The folder will probably be in Anaconda3/envs/polytrend



12. Click on the upload button and upload the script you have downloaded from GitHub in step 2. Open it and follow the procedure described in the script.