Computer Vision

Introduction to Exercise 4

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Coding Exercise

1. Download the required data
2. Setting up jupyter notebook locally on your machine
3. Use google colab in your browser
4. Comments on the Marching Cubes exercise

Download Exercise & Dataset

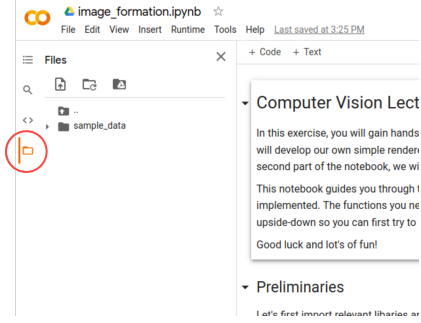
- Download the zip archive for this exercise, unzip it.
- Go to subfolder code/data and execute get_data.sh .
- If you want to work on Google Colab, remember to upload the data folder!

Local Environment Setup

- Create the new environment `lecturecv-ex4`:
  `conda env create -f environment.yml`
- Activate the environment:
  `conda activate lecturecv-ex04` (I advise against using old environment!)
- Run this command from the directory where the jupyter notebooks are located:
  `jupyter-notebook`

Online Environment Setup: Google Colab

- Navigate to `https://colab.research.google.com/` in your browser
- Click on File → Upload notebook and upload the respective notebook
- Click to upload additional files by clicking on the folder symbol on the left:



Marching Cubes Exercise

- Google Colab: For the marching cubes exercise you need to run `!pip install k3d trimesh` before the beginning
- Marching Cubes requires some lookup tables and mesh representations can be difficult to understand:
- If you have trouble understanding Marching Cubes, here is an awesome blog post that is worth reading: `http://paulbourke.net/geometry/polygonise/`

Questions?