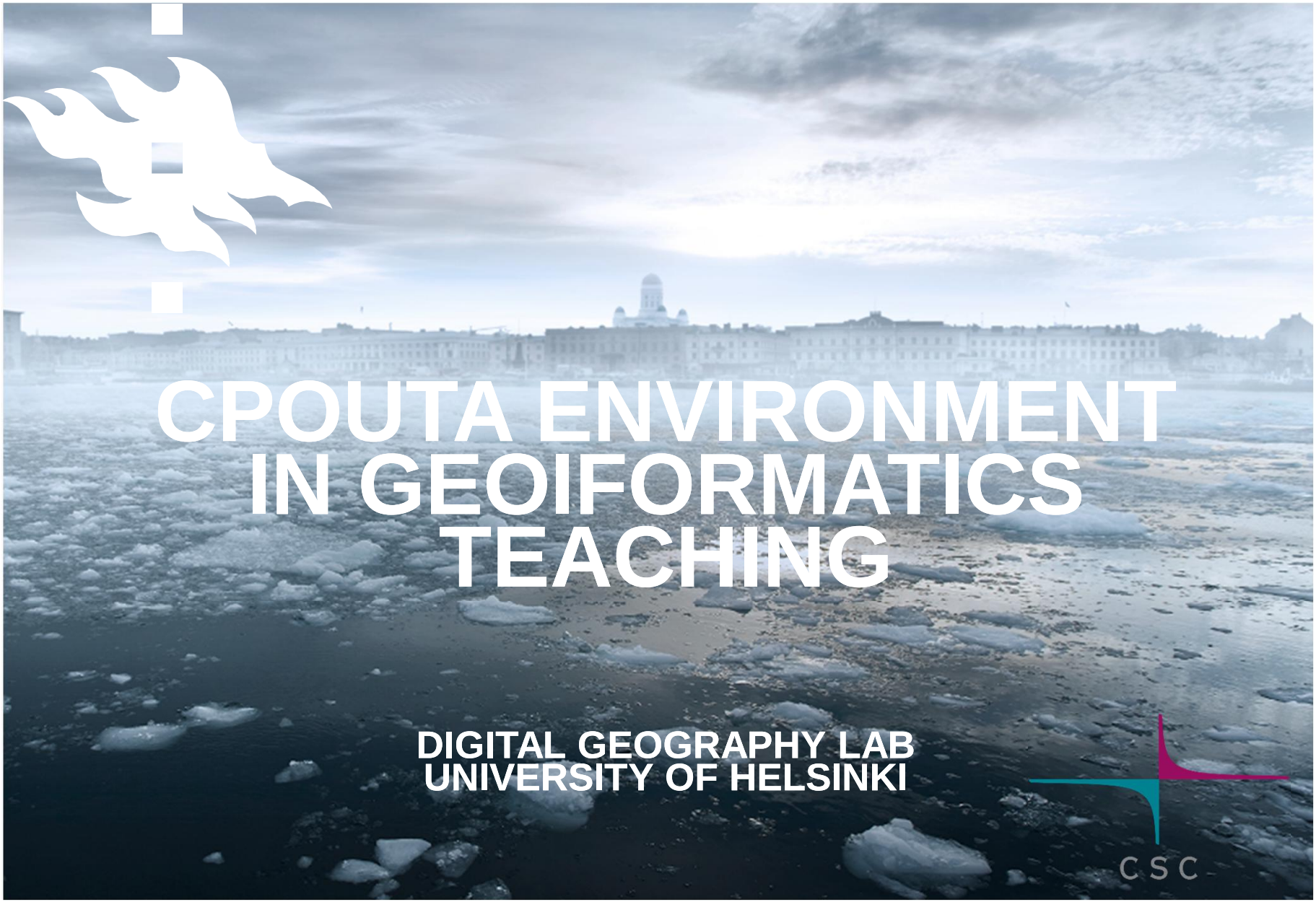

CPOUTA ENVIRONMENT
IN GEOIFORMATICS
TEACHING
DIGITAL GEOGRAPHY LAB
UNIVERSITY OF HELSINKI
CSC

CONTENTS

cPouta use cases from geoinformatics courses at the University of Helsinki:

- Open data course: **GeoServer**
- Advanced GIS course: **PostGIS**
- Python course: **Jupyter Lab**

GEOSERVER

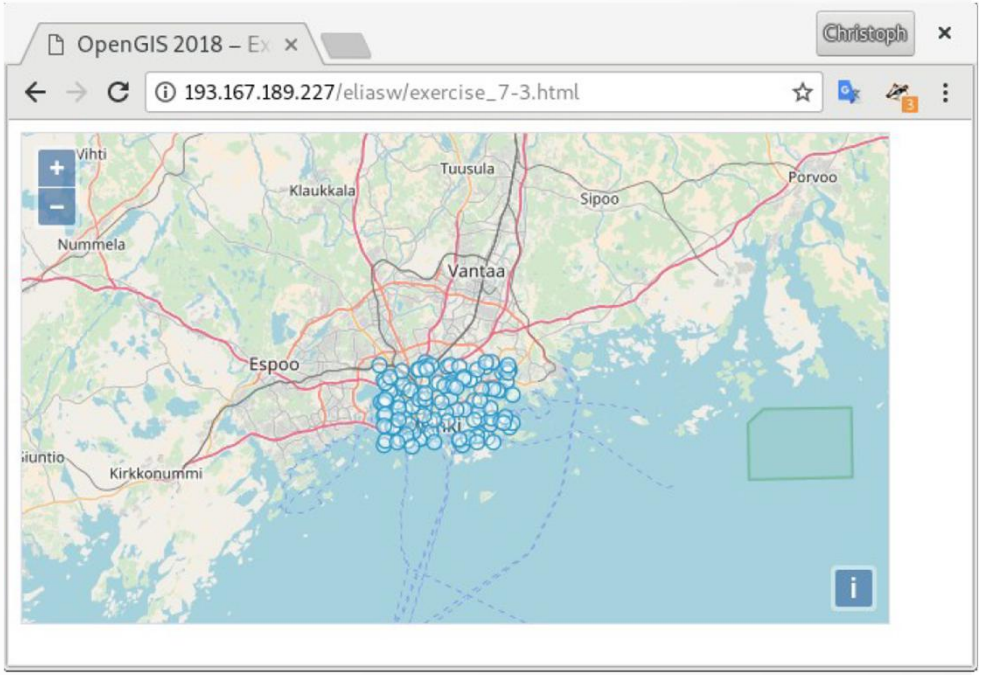
Challenge:

- Teach the basics of **Geoserver** and sharing geospatial data.
- Use shared datasets in students' custom web maps

GEOSERVER

Solution

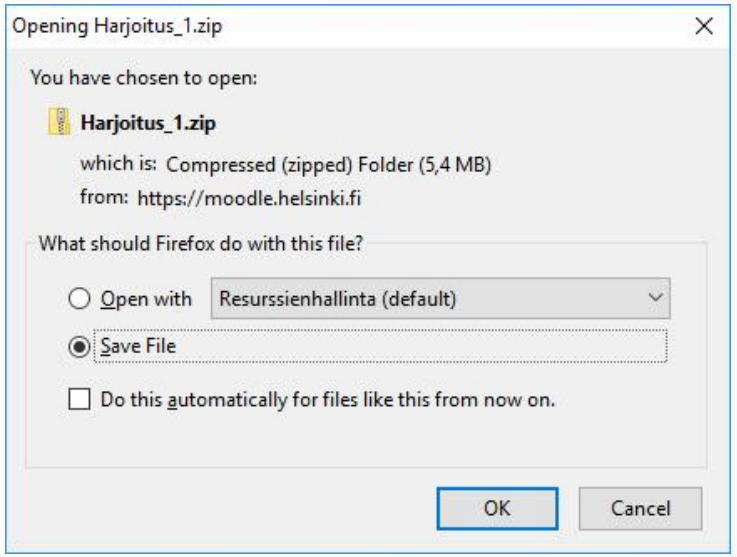
- Remote CSC server to run course Geoserver
- All students used the same account
- Datasets were imported using QGIS GeoServer Explorer plugin
- Shared datasets were used in custom OpenLayers web maps



POSTGIS

Challenge:

- Teach the basics of **PostgreSQL/PostGIS**
- Distribute exercise data in a smart way



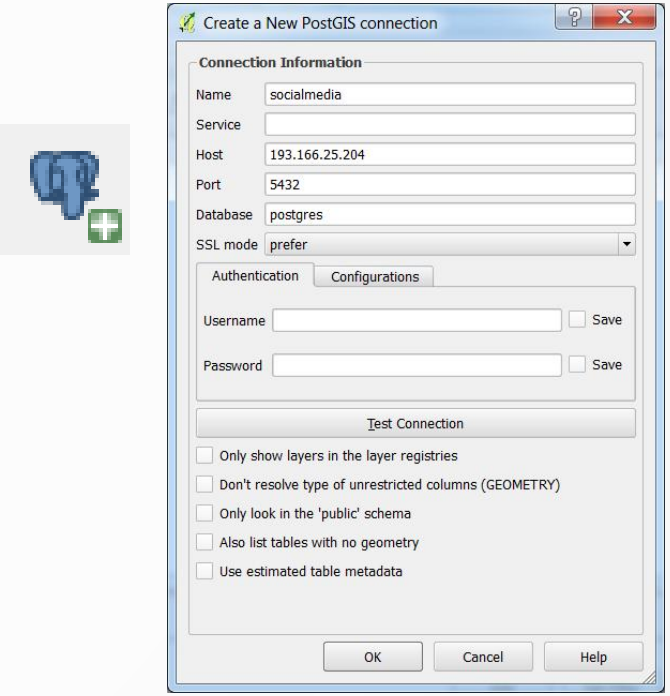
In stead of this...

POSTGIS

Challenge:

- Teach the basics of **PostgreSQL/PostGIS**
- Distribute exercise data in a smart way

Solution: PostGIS (running on CSC server) used via QGIS



SETTING THINGS UP

- **Collaboration** between the University and CSC:
- **CSC**
  - Provides cPouta infrastructure
  - Gives advice about installations. **Instructions** to setup popular server software (GeoServer, PostGIS) in CSC's cPouta environment are available on GitHub.
- **University** (the teacher and/or local IT support):
  - **Sets up the virtual machine**
  - **Installs the required software** (eg. Geoserver or PostGIS)
  - Creates users accounts for students
  - **Monitors** the virtual machines and software usage

AUTOMATING GIS PROCESSES

Challenge:

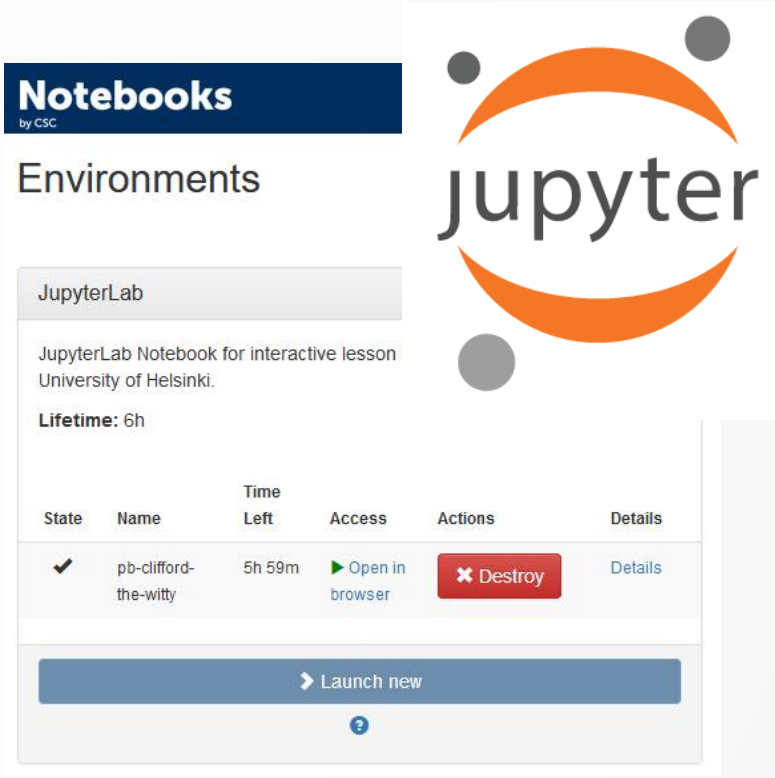
- Organizing interactive **python teaching** for 80 + students!
- Geospatial Python libraries

AUTOMATING GIS PROCESSES

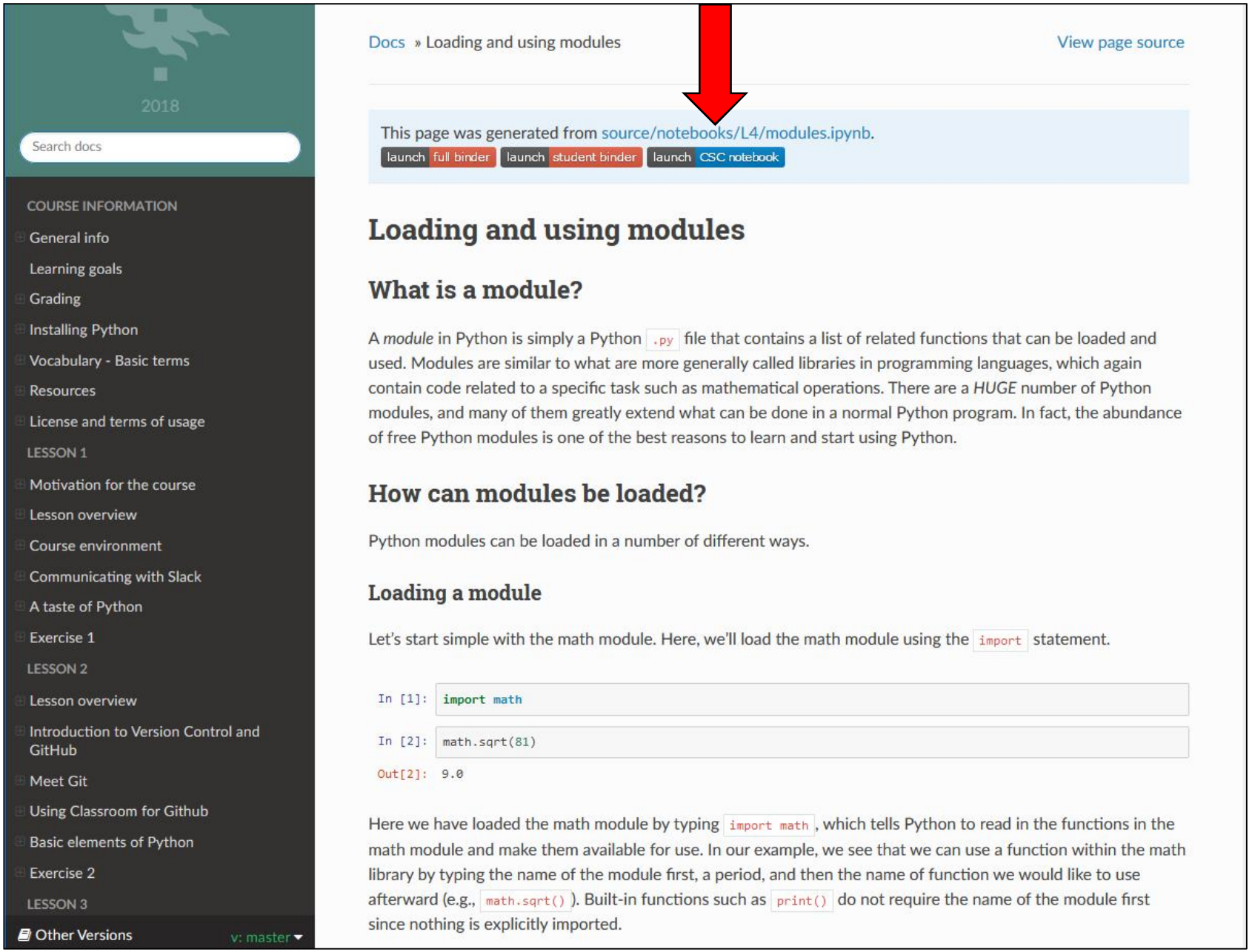
Challenge:

- Organizing interactive **python teaching** for 80 + students!
- Geospatial python libraries

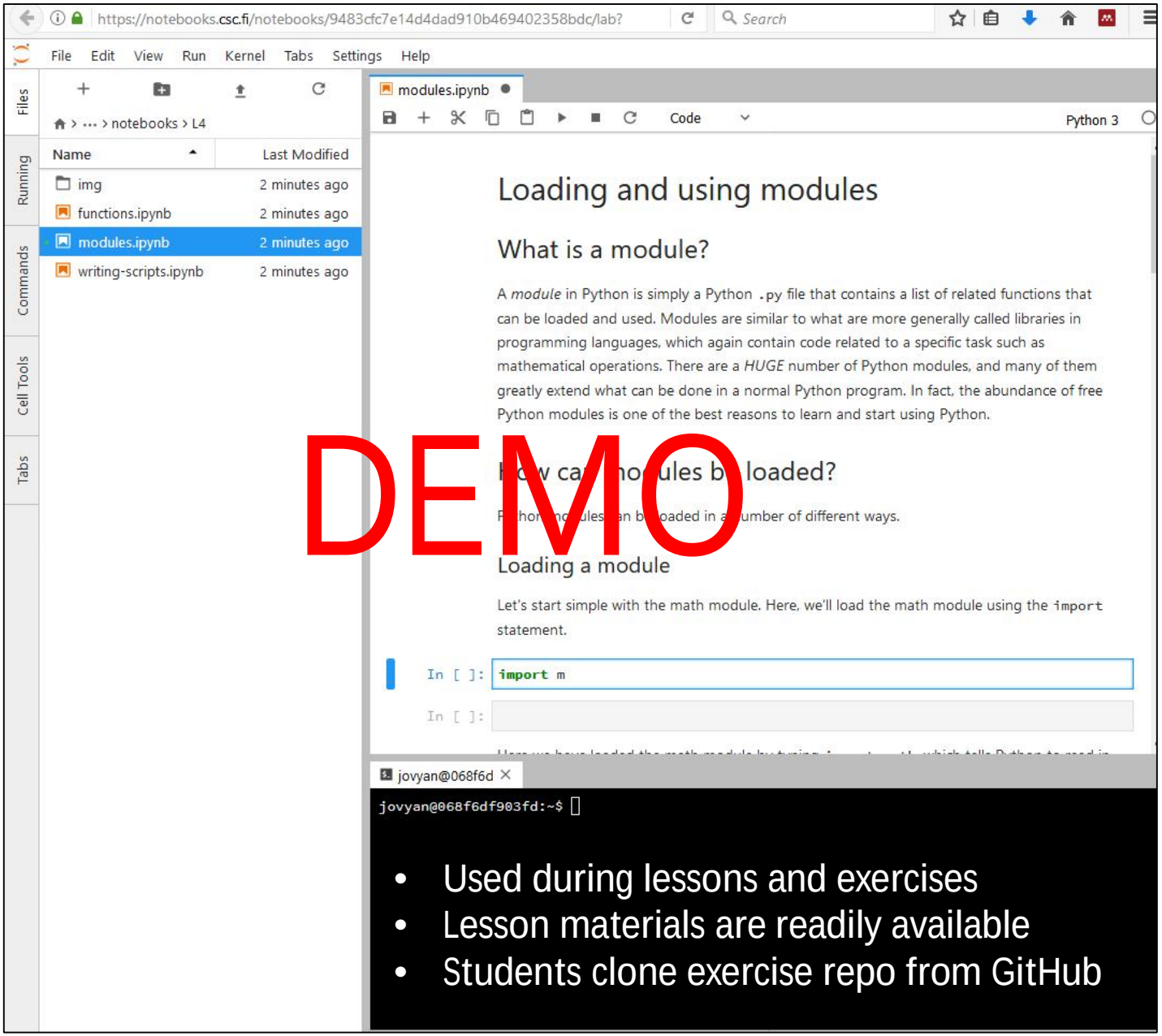
Solution: JupyterLab & notebook (docker) hosted by CSC



Notebooks by CSC Dashboard



Static webpage at: https://geo-python.github.io/



Interactive version of the lesson at: https://notebooks.csc.fi/


KIITOS!
helsinki.fi/digital-geography
geo-python.github.io