Setting Up GEE

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Step 1:

GEE Registration

1) Visit https://signup.earthengine.google.com/
2) Sign-up with your Google account
3) After signing up, you should obtain the approval instantaneously or within minutes

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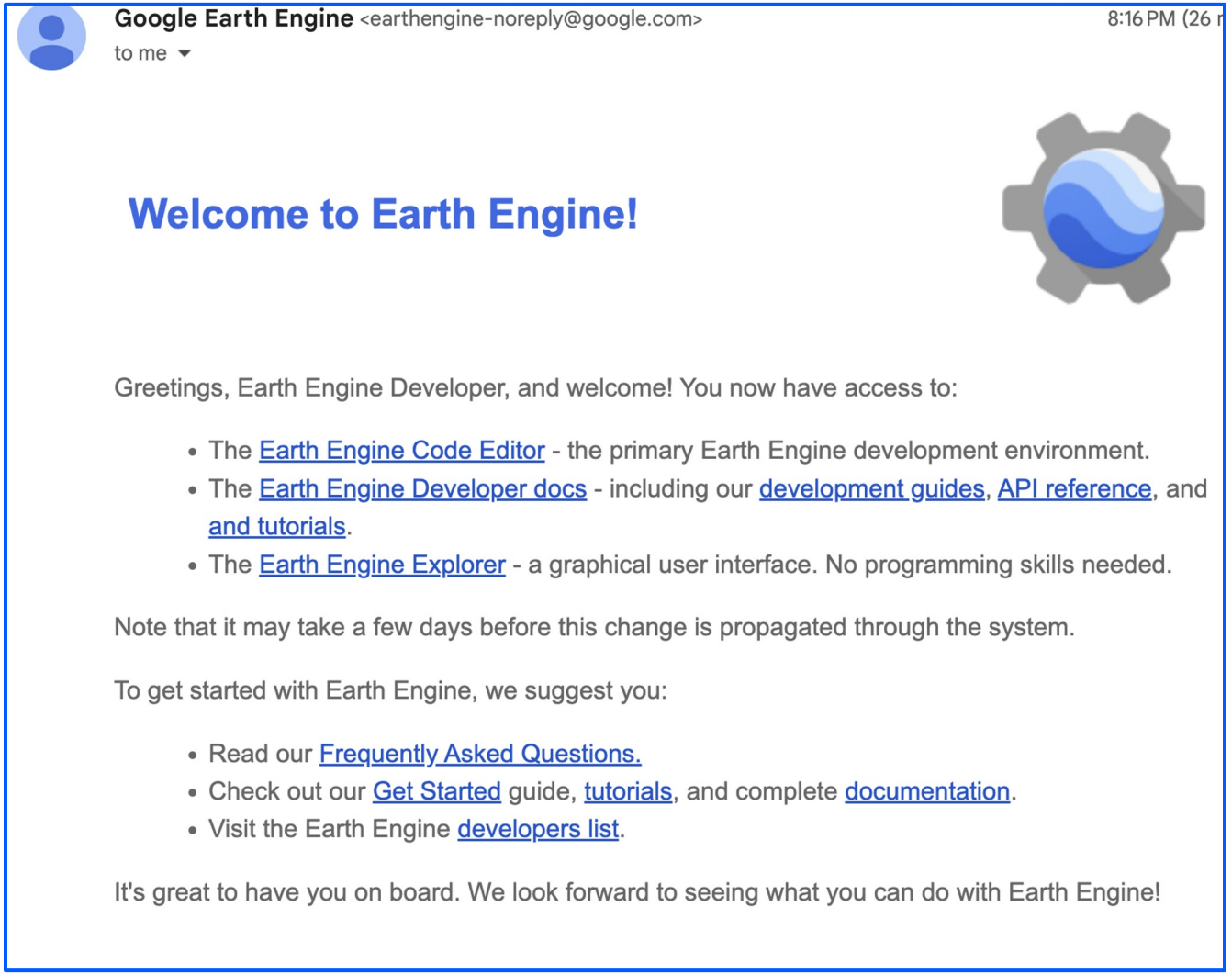
Step 1

GEE Registration



Google Earth Engine <earthengine-noreply@google.com> 8:16 PM (26 r

to me

Welcome to Earth Engine!

Greetings, Earth Engine Developer, and welcome! You now have access to:

- The Earth Engine Code Editor - the primary Earth Engine development environment.
- The Earth Engine Developer docs - including our development guides, API reference, and and tutorials.
- The Earth Engine Explorer - a graphical user interface. No programming skills needed.

Note that it may take a few days before this change is propagated through the system.

To get started with Earth Engine, we suggest you:

- Read our Frequently Asked Questions.
- Check out our Get Started guide, tutorials, and complete documentation.
- Visit the Earth Engine developers list.

It's great to have you on board. We look forward to seeing what you can do with Earth Engine!

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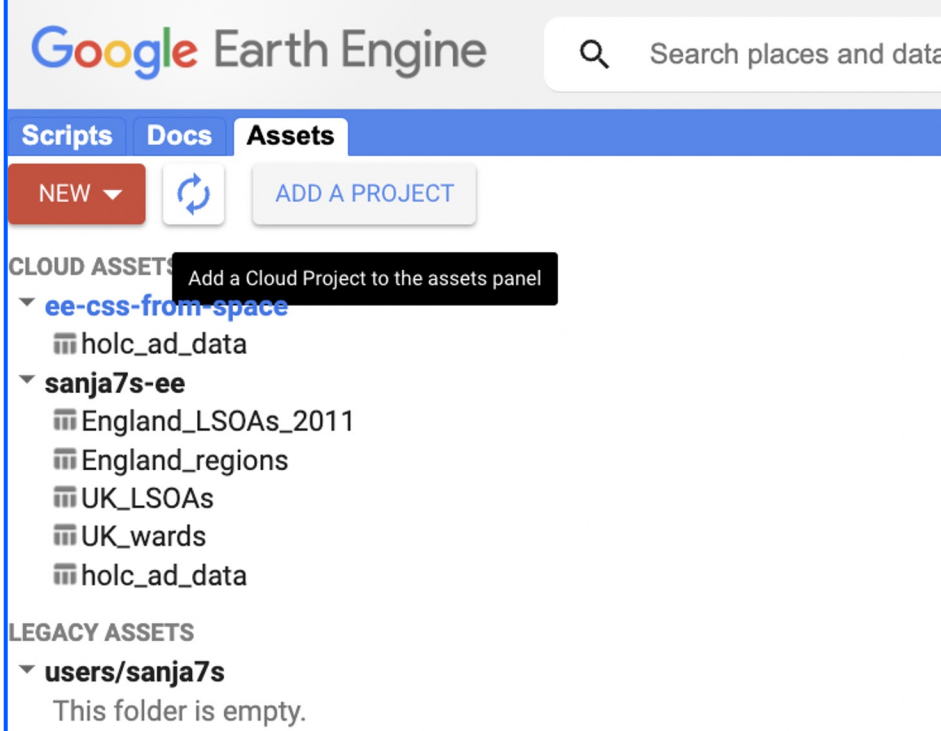
Step 2

Creating an EE project

Go To:
https://code.earthengine.google.com
Select Tab “Assets”
Click:
ADD A PROJECT



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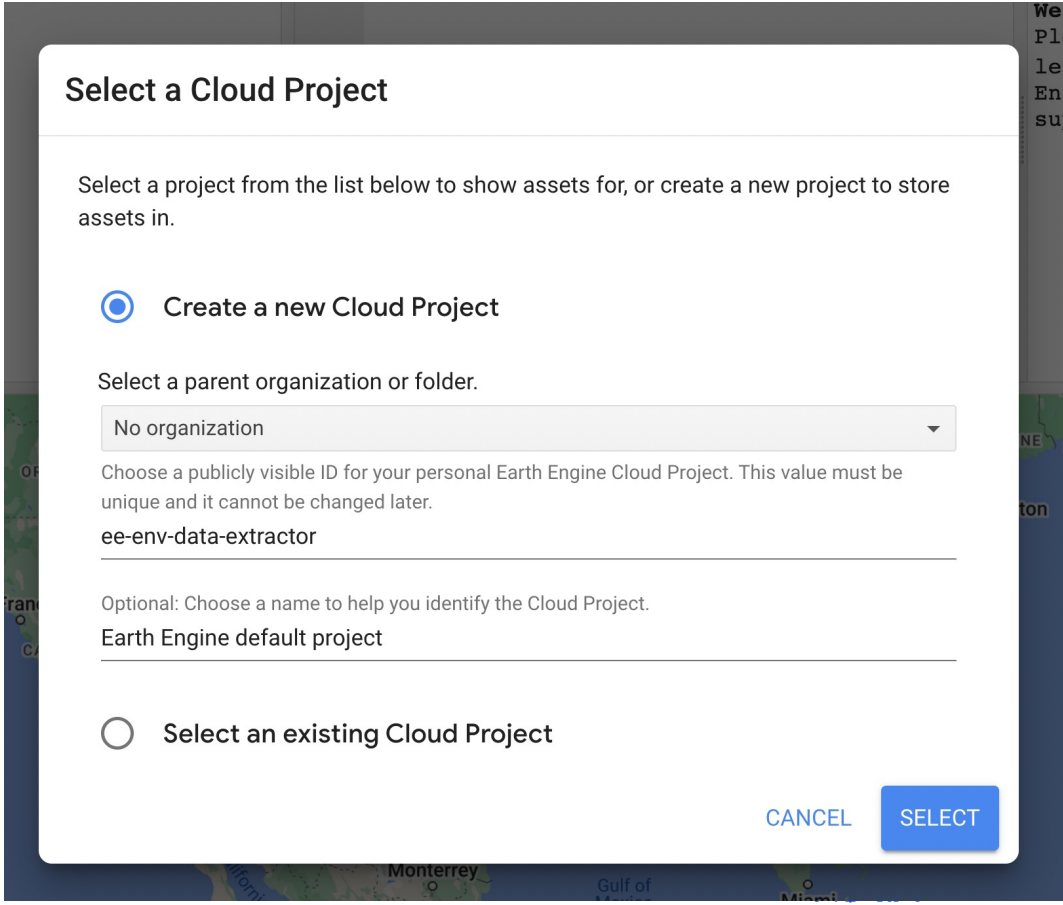
Step 2

Creating an EE project

Click **Create a new Cloud Project**



*This project name you will later use in Colab Notebooks.

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Step 3:

Place this folder, i.e.,
code/collate_data/environmental_data_extractor
to Your Drive

e.g., drive/MyDrive/your_project_folder

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Step 4: GEE Assets

Upload LSOA/Region Data from **data/auxiliary_data** to

To your GEE Assets on

https://code.earthengine.google.com/

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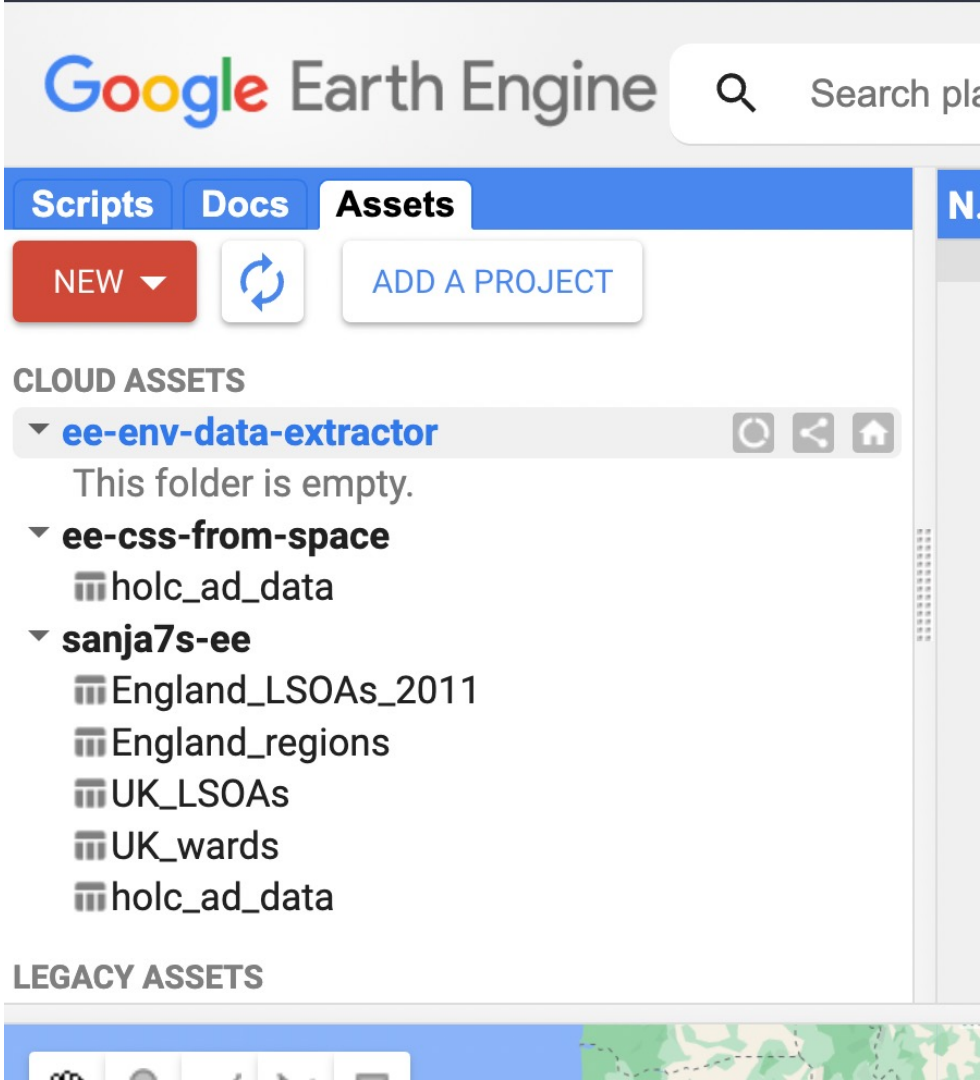
Step 4: GEE Assets

https://code.earthengine.google.com/

Select your newly created project

and then choose **NEW**



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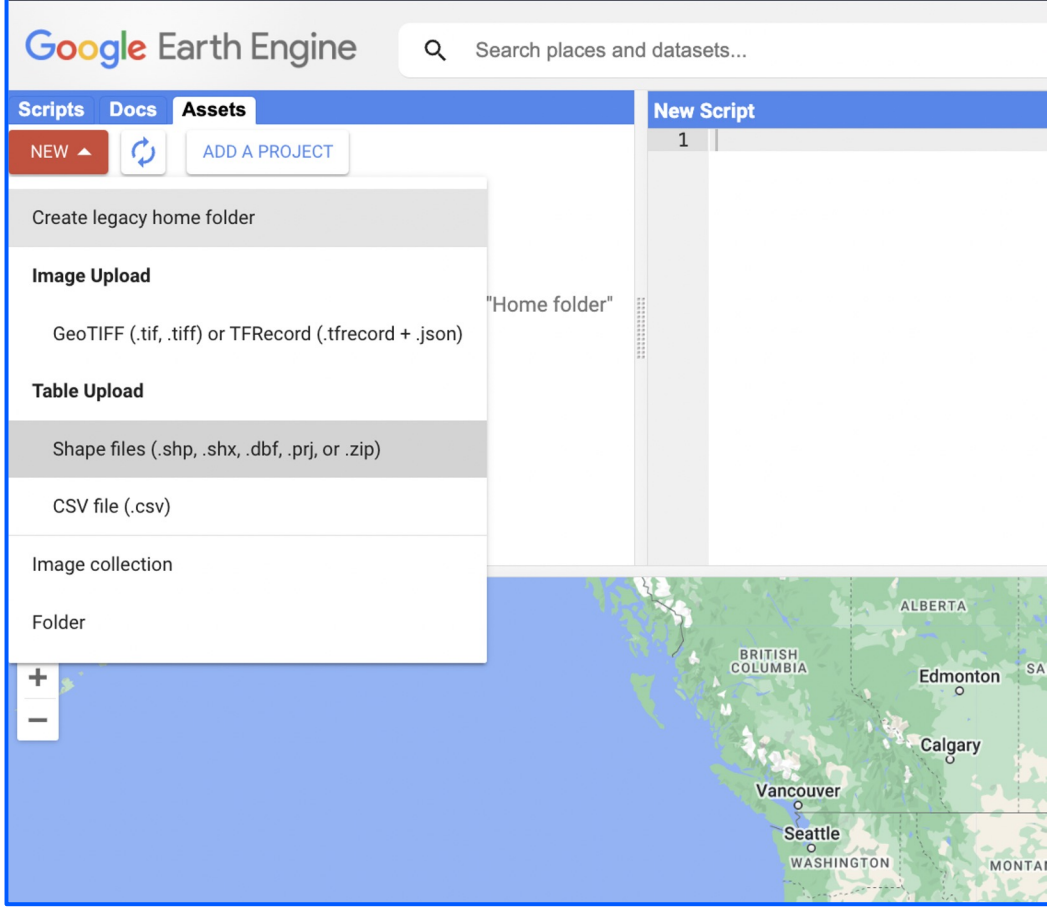
Step 4: GEE Assets

https://code.earthengine.google.com/

choose **Shape files**



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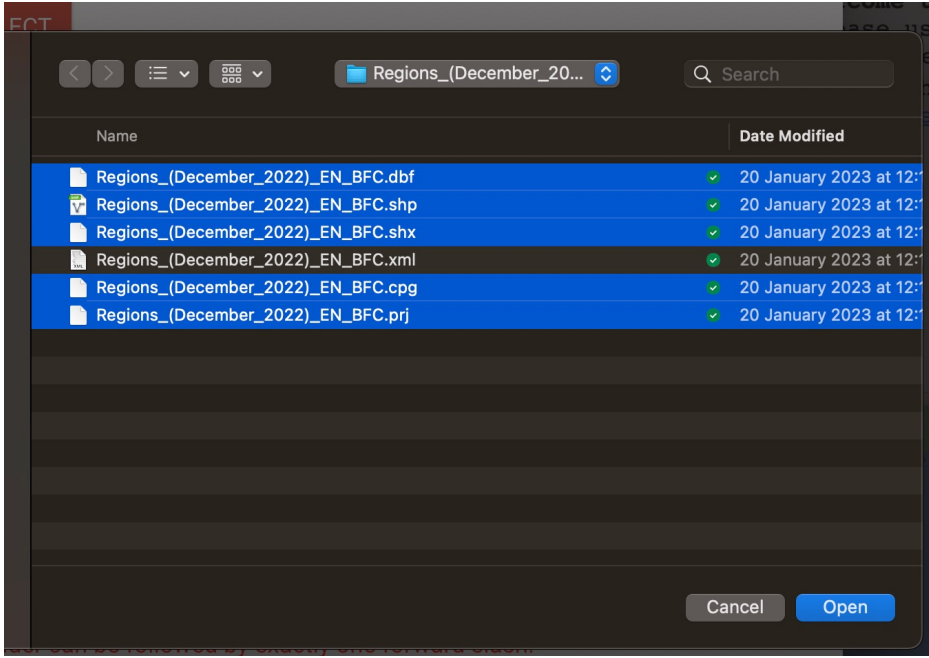
Step 4: GEE Assets

https://code.earthengine.google.com/

For Regions, choose all the files from **Regions_(December_2022)_EN_BFC** except the .xml file.

Set asset name as **regions** and then press **UPLOAD**.



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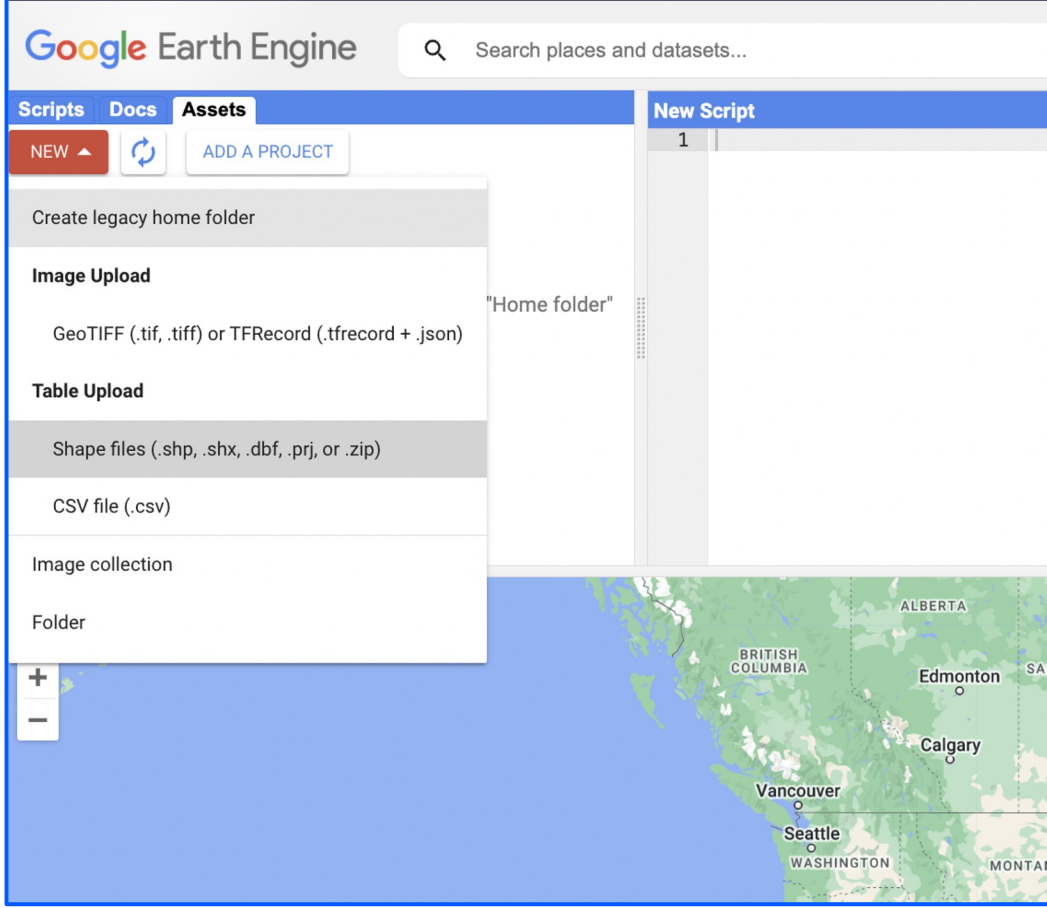
Step 4: GEE Assets

https://code.earthengine.google.com/

Repeat the same for LSOA shape files



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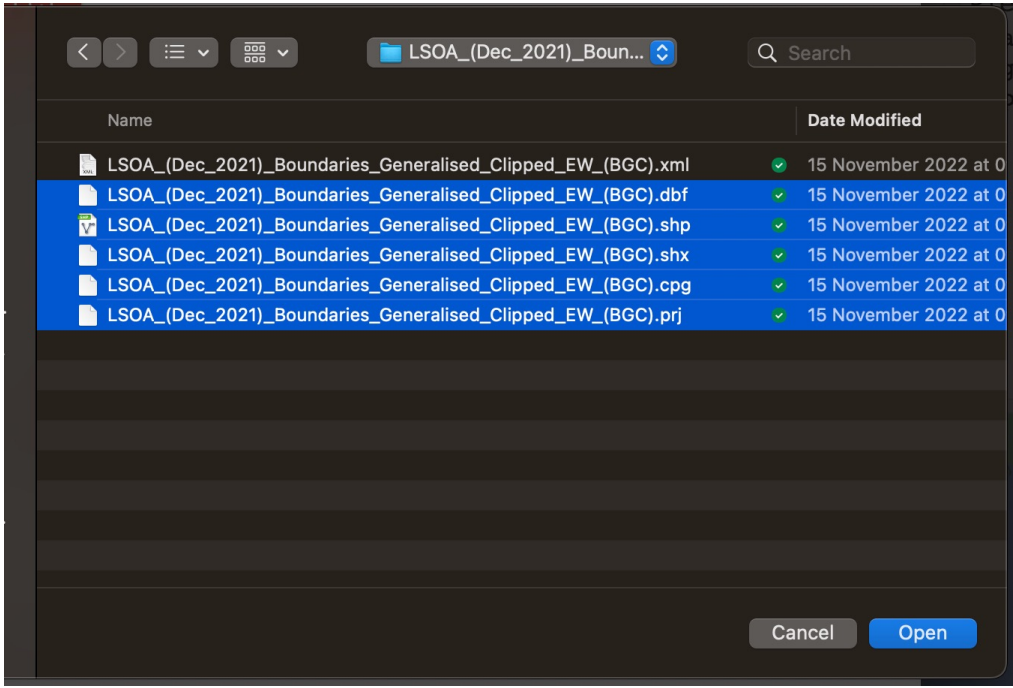
Step 4: GEE Assets

https://code.earthengine.google.com/

For LSOAs, choose all the files from **LSOA_(Dec_2021)_Boundaries_Generalised_Clipped_EW_(BGC)** Except the .xml file.

Set asset name as **LSOAs** and then press **UPLOAD**.



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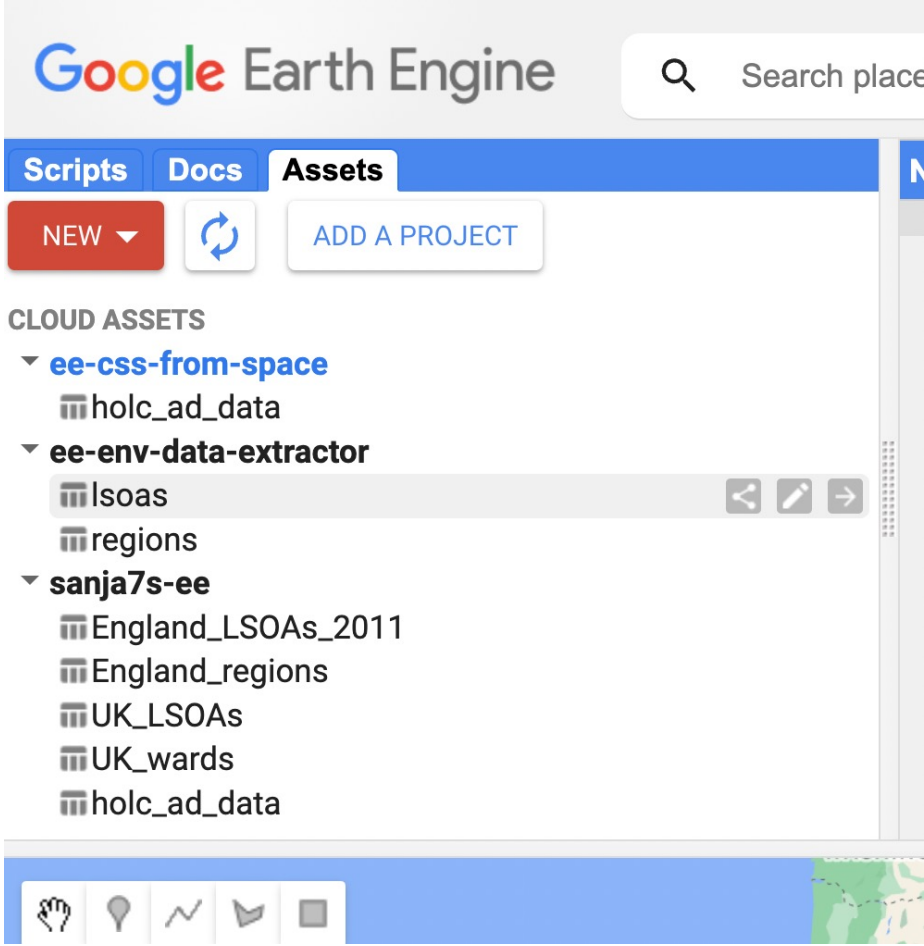
Step 4: GEE Assets

https://code.earthengine.google.com/

Please do wait a bit, as these are large files, and it will take a couple of minutes that they are uploaded to your assets.

Once they are, you should be able to see them as so to the right.



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NOW THE EXTRACTOR SHOULD WORK FOR YOU!

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Why we need a tool such as Google Earth Engine (GEE)?

Satellite and EO data are huge, and it takes time to download, preprocess and analyze them.

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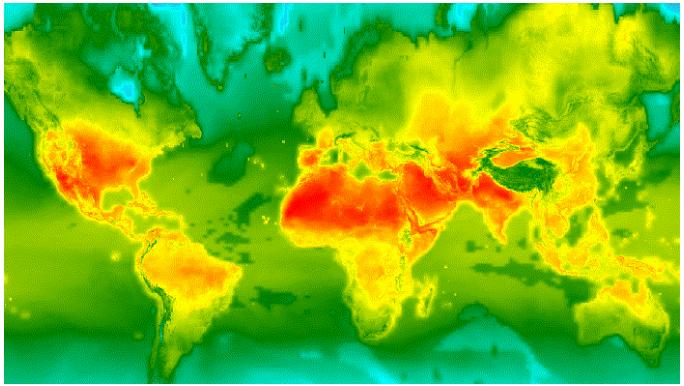
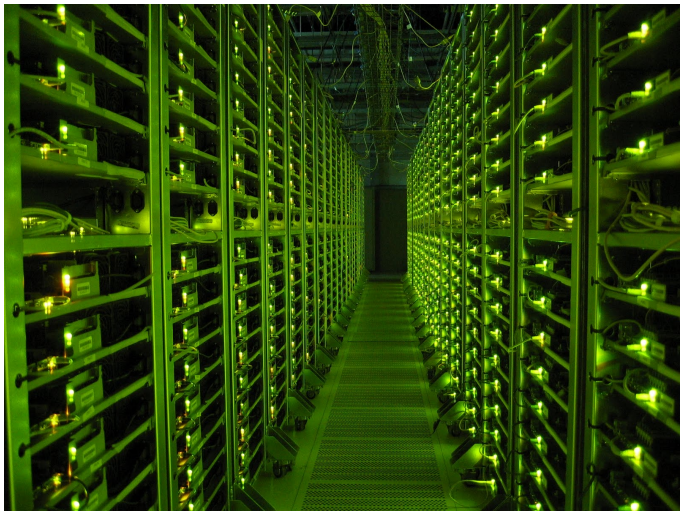
What is Google Earth Engine (GEE)?

A cloud-based tool that consists of:





1. A large repository of analysis-ready **EO data** (Earth Engine Data Catalog)
2. **Computational Infrastructure** with a pool of servers co-located with data
3. Powerful **API** (JavaScript, Python, Julia, etc.)

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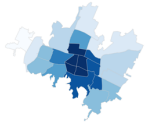
How GEE works?

Main data data structures

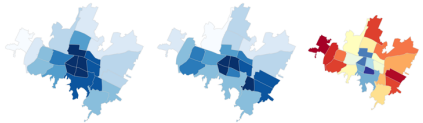
Image – raster

Image Collection

Feature -- vector



Feature Collection



Other fundamental data structures in Earth Engine include **Dictionary, List, Array, Date, Number** and **String**.

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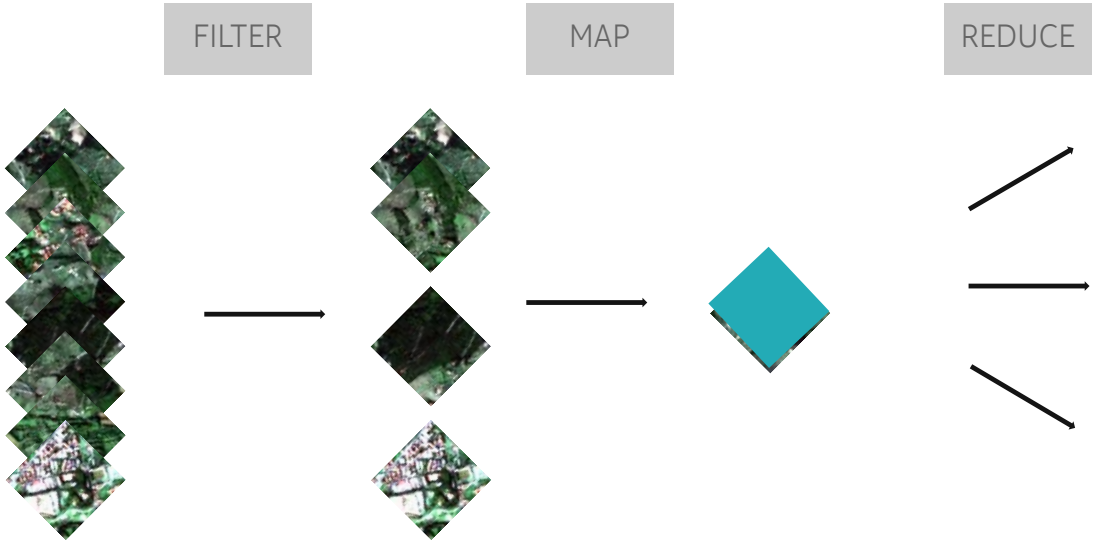
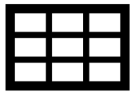
How GEE works?

Main methods and functions





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