FOSS4G FIRENZE 2022

kan Territory & IT

Development of interactive platforms for city modeling and digital twins using React and MapLibre

Sebastian Lopez - Walter Shilman

https://foss4g2022workshop.kan.com.ar/

Schedule | Agenda

- Introduction
- State of the art of Digital Twins
- Types of data (Mesh, Raster, Vectorial, DEM, IFC, b3dm)
- Architecture of the Map Viewer
- Installing requirements
- Building your project
- Setting up the development workspace
- Code inspection and code detail

Break 20’

- Q&A
- Experiences working with Mesh data for Maplibre
- Quick look at a project using Mesh and “Termo”
- Setting up Backend workspace
- Inspecting docker-compose.yml
- Deployment of the Tile Server
- Preparing your data
- Connection between frontend mapviewer and local map server

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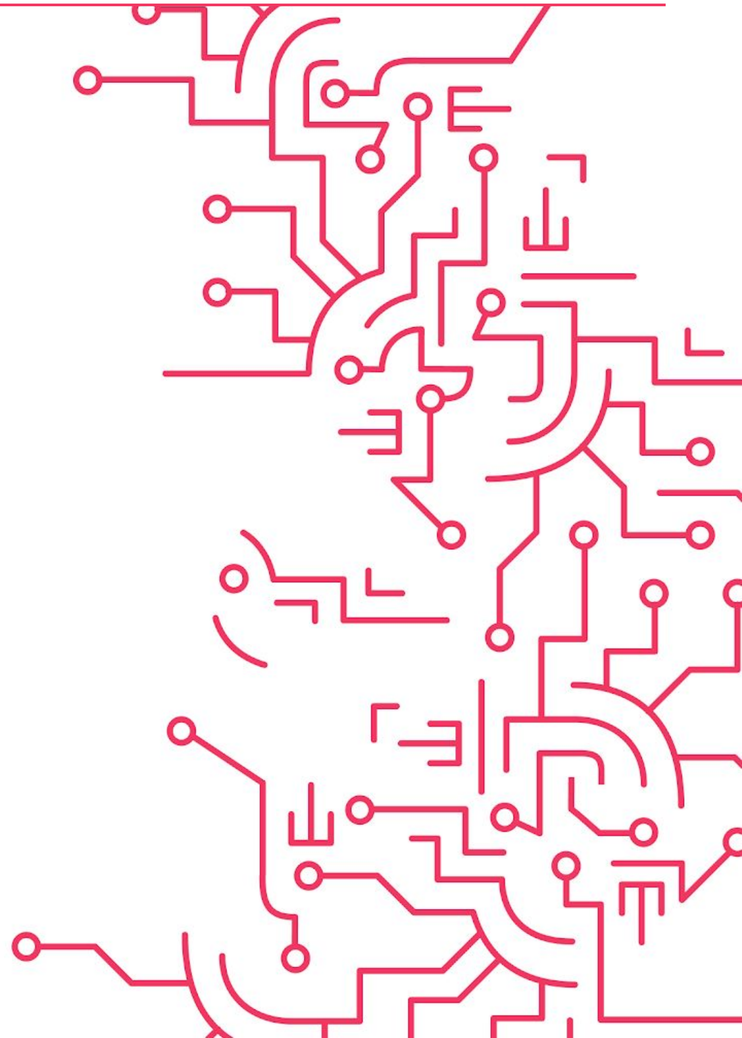
Introduction

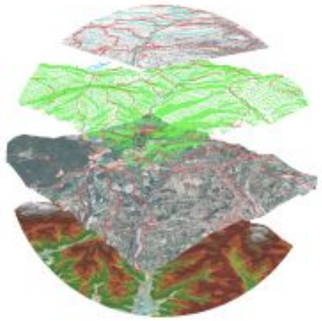


State of the art of Digital Twins

Evolution of user's requirements

1

Territory Information



2

Geographic Information System

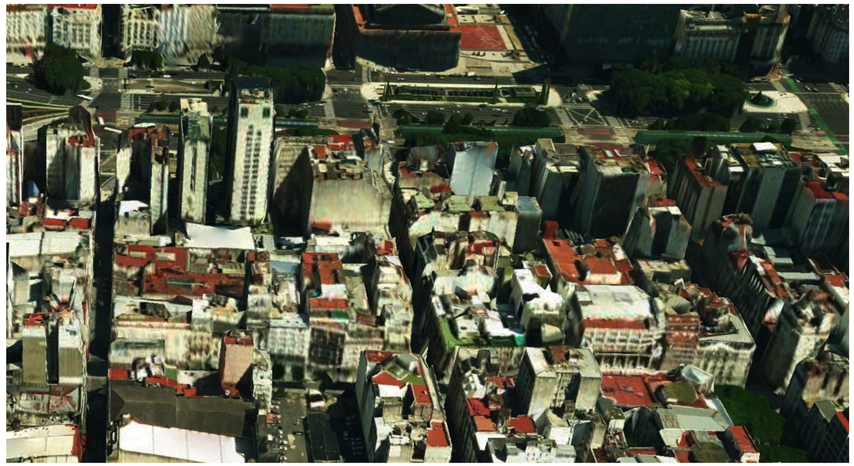
3

Smart Cities

4

Digital Twin

Types of data

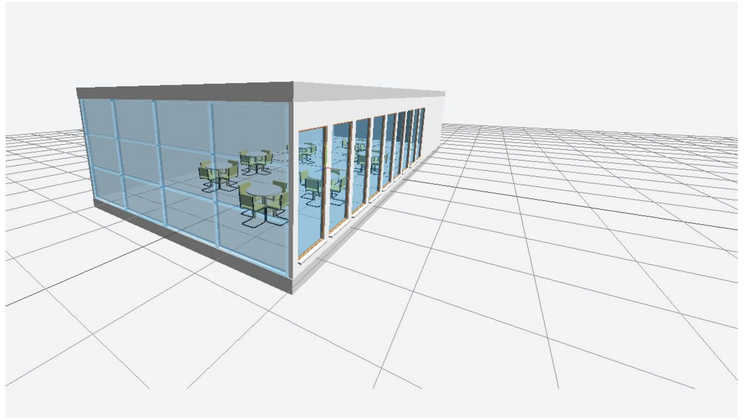


Mesh

Raster

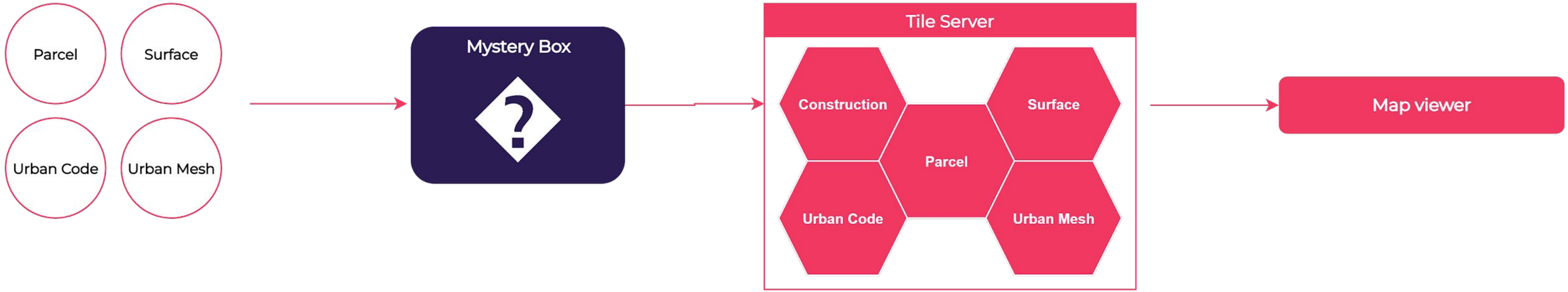
Vector

DEM



IFC

Architecture of the mapviewer



Installing requirements

Version control system

IDE VSCode

Node JS

Building your project

- Setting up develop workspace: apps, libs, dependencies, repositories
- Code inspection and code detail

Break

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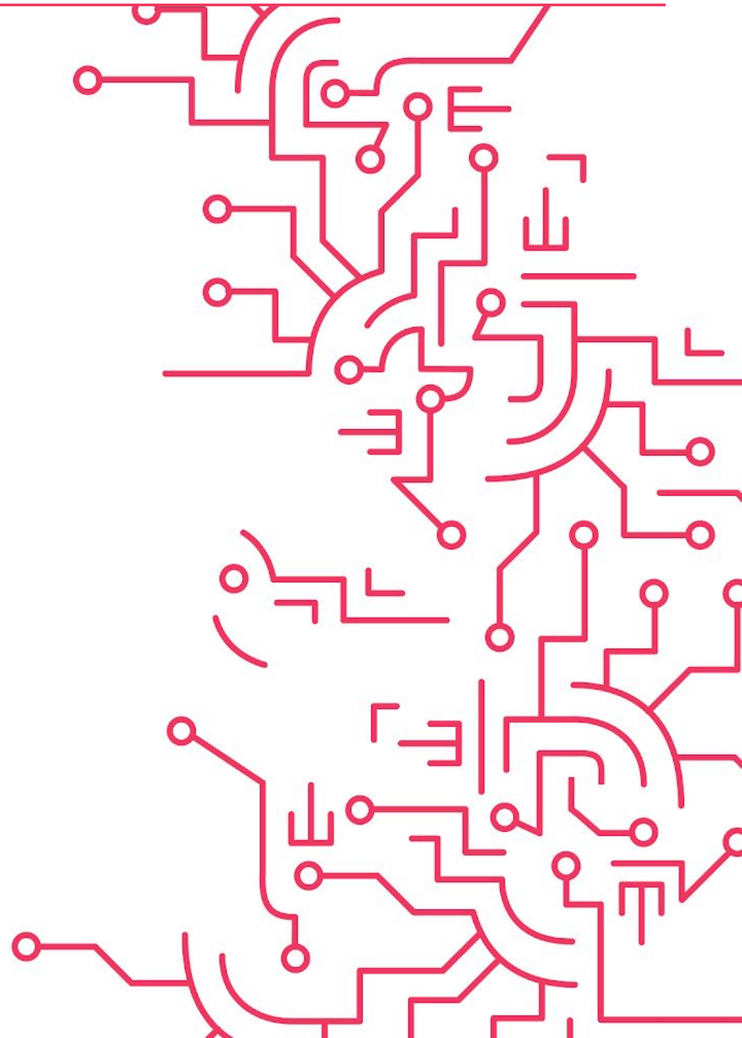
Q&A



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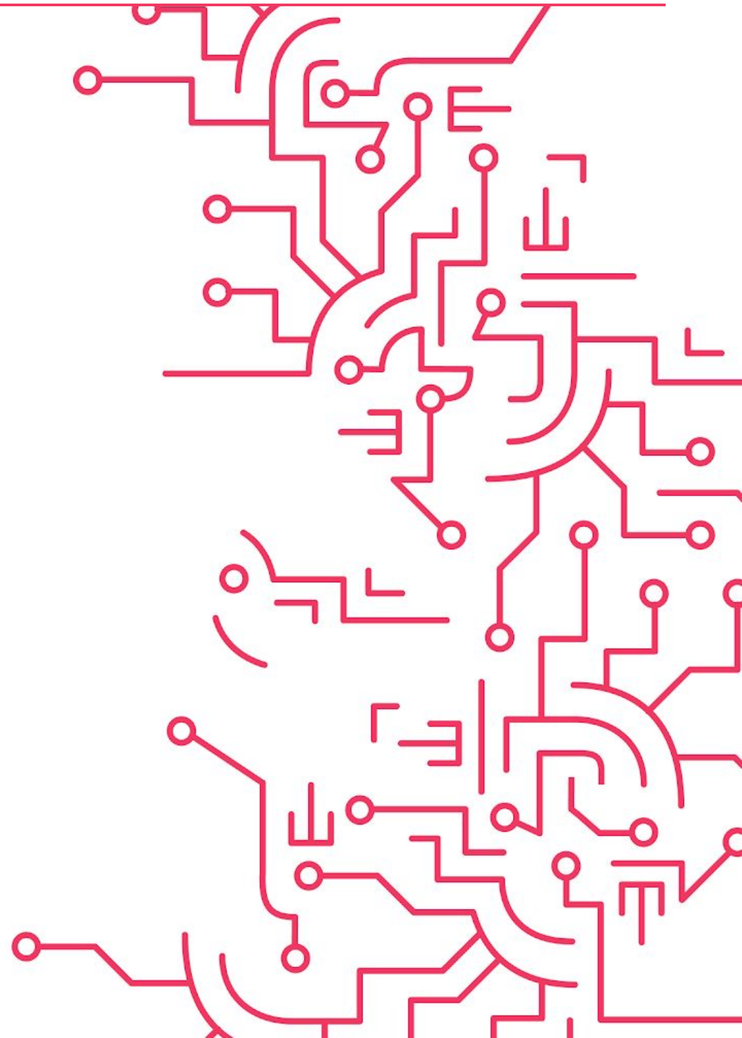
Experiences working with Mesh data for Maplibre

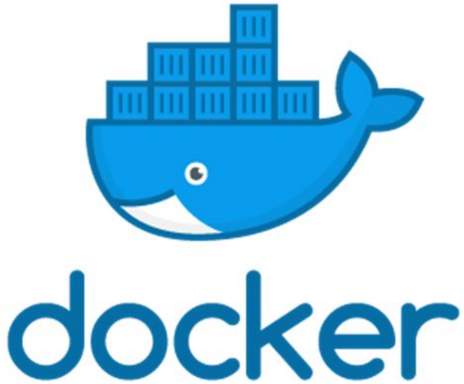


Quick look at a project using Mesh and “Termo”

Live DEMO Mesh and Termo project

Setting up Backend workspace

Installing requirements



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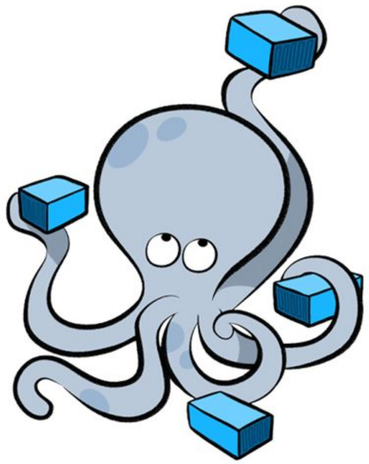


[Docker]

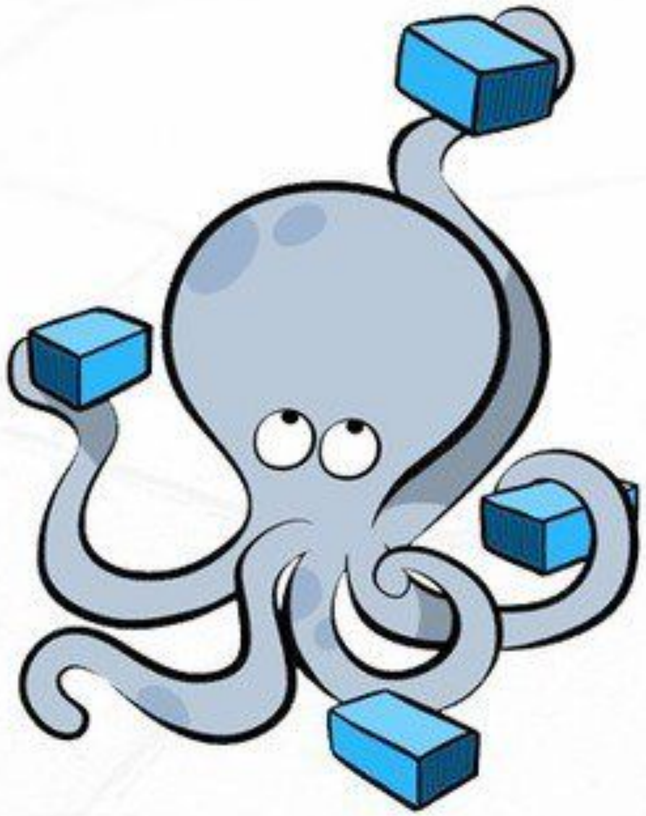
[Docker Compose (only for linux)]

Inspecting docker-compose.yml

```yaml
version: "3.4"

services:
  tileserver:
    image: maptiler/tileserver-gl
    volumes:
      - "./data:/data"
    command: ["-p", "80", "-c", "/data/config.json"]
    ports:
      - "81:80"
```

Deployment of the Tile Server



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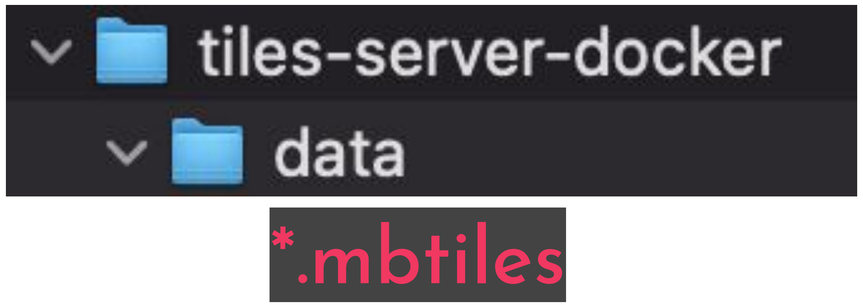
```

```
$ docker-compose up
```

Preparing your data



config.json

```
{
   "data":{
      "layer_1":{
         "mbtiles":"layer1.mbtiles"
      }

   }
}
```

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Thanks!

Contact us:

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