The GeoSight Handbook

Insights from Spatial Data.

UNICEF
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Contents

1 For Users

1.1 User Guide

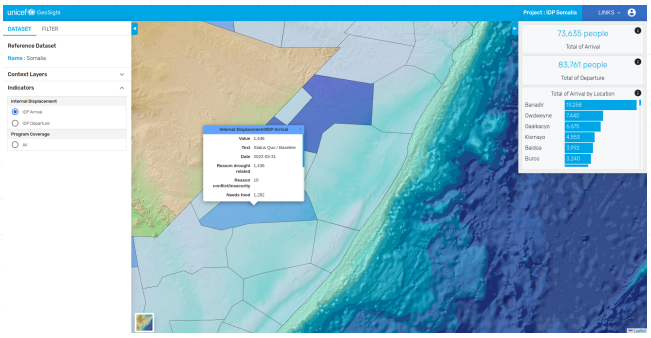
1.1 Overview

The GeoSight platform is a situational awareness platform to monitor multiple factors including: health, child protection, nutrition, wash (water, sanitation and hygiene) and education in a geographic region.

To fully understand the platform and the information you can obtain from it, you need to understand how it works.

1.1 Map Interactions

The GeoSight map interaction tools give an interactive map experience. Users are able to zoom and pan to areas of interest and display information information in just a few clicks.



1.1.1 Zoom In and Out

Zooming in

Zooming into an area on the map is useful to show a specific area of interest and to see more detail.

To Zoom in or out on the map canvas either scroll your mouse up and down or use Ctrl+shift+click and drag an square around the area you wish to zoom in on.

1.1.2 Move Around the Map

Moving Around the Map

Navigating or panning around the map is useful to focus on specific areas of interest.

To pan, `click` the mouse on the map canvas and while holding the click drag the map to the desired area of interest.

1.1.3 Information Display Window

Information Display Window

To gain information on a specific area within the map, "click" on that area with your mouse. By clicking on an area, a popup window with information related to your selected layers for that area will be displayed on the screen. This action will also change the info window in the ‘Summary Tab' to the ‘Indicators Tab'. You can also view more details by "clicking" on ‘details’ in the popup window. This will also change the info window’s tab to the ‘Details Tab'.

1 For Administrators

1.1 Administrator Guide

1 For Developers

1.1 Setup

This document covers how you can set up the project, for production and development environment setup.

1.1 Installation

1.1.1 Preparation

1.1.1.1 Dependencies installation

The project provide **make** command that making setup process easier. To install make on your machine or virtual box server, do:

Code:

```
sudo apt install make
```

Project has recipe that you can use to run the project in one command. This recipe needs docker-compose to be able to use it. To install it, do:

Code:

```
sudo apt install docker-compose
apt install ca-certificates curl gnup lsb-release
```

1.1.1.2 Docker installation

The project needs docker to be able to run it. To install it, please follow below instruction.

Code:

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrir
```

On the next prompt line:

Code:

```
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/docker-archive-keyring.gpg]
$(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
```

Run apt update:

Code:

```
sudo apt-get update
```

This will install docker

Code:

```
sudo apt-get install  docker-ce-cli containerd.io
```

This will check if installation of docker was successful

Code:

```
sudo docker version
```

And it should return like this

Code:

```
Client: Docker Engine - Community
 Version:           20.10.9
 API version:       1.41
 Go version:        go1.16.8
 Git commit:        c2ea9bc
 Built:             Mon Oct  4 16:08:29 2021
 OS/Arch:           linux/amd64
 Context:           default
 Experimental:      true
```

Manage docker as non-root

This will ensure that the docker can be executed without sudo.

Code:

```
sudo systemctl daemon-reload
sudo systemctl start docker
sudo usermod -a -G $USER
sudo systemctl enable docker
```

Verify that you can run docker commands without sudo.

Code:

```
docker run hello-world
```

For more information how to install docker, please visit Install Docker Engine

1.1.1 Project Setup

1.1.1.1 Clone GeoSight repository

This will clone the GeoSight repository to your machine

👩‍💻 Code:

```
git clone https://github.com/unicef-drp/GeoSight
```

1.1.1.2 Set up the project

This will set up the GeoSight project on your machine

👩‍💻 Code:

```
cd GeoSight
cd deployment
cp docker-compose.override.template.yml docker-compose.override.yml
cp .template.env .env
cd ..
make up
```

Wait until everything is done.

After everything is done, open up a web browser and go to http://127.0.0.1/ and the dashboard will open:

By Default, we can use the admin credential:

👩‍💻 Code:

```
username : admin
password : admin
```

1.1.1.3 Set up different environment

To set up different environment, for example the Default credential, or the port of server, open **deployment/.env**. You can check the description below for each of variable.

👩‍💻 Code:

```
COMPOSE_PROJECT_NAME=geosight
NGINX_TAG=0.0.1  -> Change this for different nginx image
DJANGO_TAG=0.0.1 -> Change this for different django image
DJANGO_DEV_TAG=0.0.1 -> Change this for different django dev image

# Environments
DJANGO_SETTINGS_MODULE=core.settings.prod -> Change this to use different django config file
ADMIN_USERNAME=admin -> Default admin username
ADMIN_PASSWORD=admin -> Default admin password
ADMIN_EMAIL=admin@example.com -> Default admin email
INITIAL_FIXTURES=True
HTTP_PORT=80 -> Change the port of nginx

# Database Environment
DATABASE_NAME=django -> Default database name
DATABASE_USERNAME=docker -> Default database username
DATABASE_PASSWORD=docker -> Default database password
DATABASE_HOST=db -> Default database host. Change this if you use cloud database or any new docke
RABBITMQ_HOST=rabbitmq

# Onedrive
PUID=1000
PGID=1000
```

After you change the desired variable and do `make up`. It will rerun the project with new environment.

1.1.1 Development setup

1.1.1.1 Development Environment

This section is for setup development, so we can develop the project and check the changes in runtime. The sections depend on what interpreter that you use

1.1.1.2 Using pycharm

This section is for using pycharm.

Requirements:

- Pycharm
- Finished **Setting up the project**

Setup interpreter

1. Go to file -> setting -> Project -> Project Interpreter -> click cog -> add
   Project Interpreter

2. Go to ssh interpreter -> Fill the form like below
   Project Interpreter

3. Click next and fill **docker** as password
   Project Interpreter

4. Click next and change interpreter like below and click finish
   Project Interpreter

5. After finish, it will show all package like below.
   Project Interpreter

6. In current page, click **path mappings**, click + button and put local path to where the project (django-project folder) and remote path is like below. and click oK.
   Project Interpreter

Now the interpreter is done. When we restart the machine, we need to do `make up` to run the project.

Setup run configuration

After the interpreter is done, we need configuration to run the project in development mode.

1. Click "Add configuration" like in the cursor in the image below. (top-right)
   Project Interpreter
2. There will be a popup, and click +, then click **django server** like below
   Project Interpreter

   Project Interpreter
3. It will show the form and fill like below.
   Project Interpreter
4. Don't click the OK yet, but click **Environment Variables** and add environments like below 9by clicking + button).
   Project Interpreter
5. After that, click OK.
6. Now we need to run the server by clicking **go** button in below image.
   Project Interpreter
7. When we click the **go** button, pycharm will run a process until like image below.
   Project Interpreter
8. Now it is done. We can access the development server in http://localhost:2000/

This development mode is DEBUG mode, and also whenever we change the code, the site will also change in runtime.

For more information how to set up on pycharm, please visit Using a Docker Compose-Based Python Interpreter in PyCharm

https://github.com/unicef-drp/GeoSight