# **Documentation for Satellite Imagery Project**

**Database File:**

All of the database related operations have been shifted to a file called database\_operations.py which is located in src folder. This file has all the code for connecting the database, insert into DB, fetching data from DB and also updating the previous data in DB.

**Utils File:**

This file utils.py is also located in src folder and it will contain all the necessary external functions that is required to make this application work. In this file currently there is only send\_email function, which is to send\_email to user for reset password instruction. As our application will grow all external functions will go in here.

**Model File:**

There are some changes being made in model.py file, first the Islamabad images are now in the directory of code. All of the images are now checked by the model. We can scroll through the images and the model will evaluate the images, we can also set the confidence level to filter out houses.

**Draw\_Poly File:**

This file converts bounding boxes of the detected houses to polygons. To make use of this first select Run Model and upload an image, after the image is uploaded select draw poly which will then convert the existing bounding box coordinates to polygons and then draw them and it will display the image.

**Convert\_box\_to\_poly File:**

This file performs conversion of bounding boxes to polygons. To make this work we will need a weights file such as sam\_hq\_vit\_h.pth in the same directory as this file, and we would also need a GPU to perform the conversion.