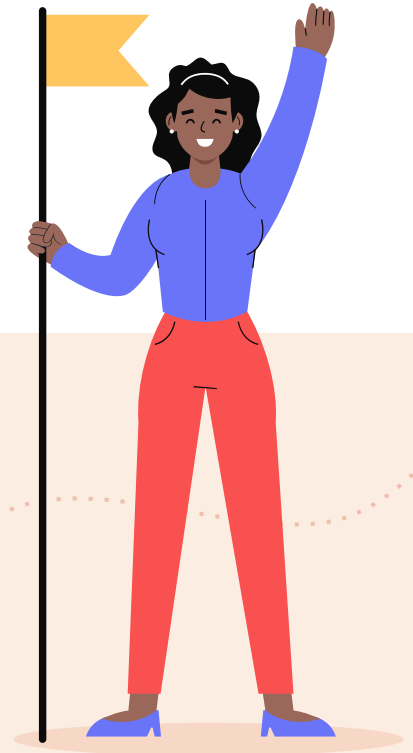


# SMART GALLERY

IITISoC Misc-2



# Our Project



Smart Gallery is an app which organises your photos, helps you find them in an easier way by allowing you to search photos using objects and scenery present in the image.

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# Brief Description

- Smart Gallery is usually built by dividing into 2 steps. The steps involved are:
  1. We have built a AI/ML model using Neural Networks which detects the objects and scenery present in our image.
  2. The labels obtained from the ML model are stored on cloud firestore which are later used for searching photos in the app.
- For example, If a new photo containing a "ball" is added to our phone's gallery . Our app will now send this image to the flask server to generate the label "ball" and stores it in firestore database. Then whenever we search for "ball" in the app's search bar we'll get this photo along with all other photos containing a "ball".




# The Smart Gallery Machine Learning Model

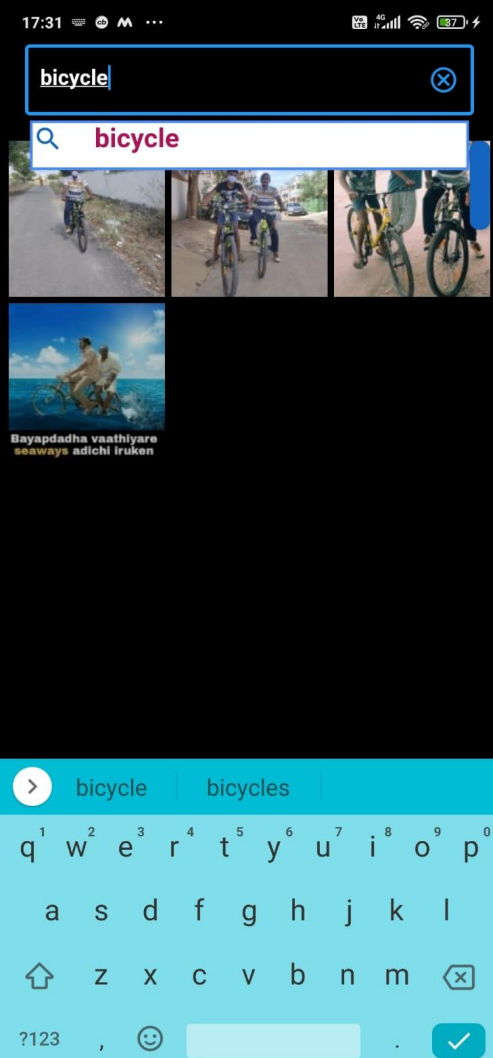
- Datasets:
    1. For detecting the common objects, we used the COCO dataset.
    2. For detecting the scenery in the background we have used the Places365 dataset.
  - Models Used:
    1. Used YoloV3 model for training the model with COCO dataset to identify the common objects in the image.
    2. Used VGG16 model for training the model with Places365 dataset for identifying the scenery in the image background.
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# App Development

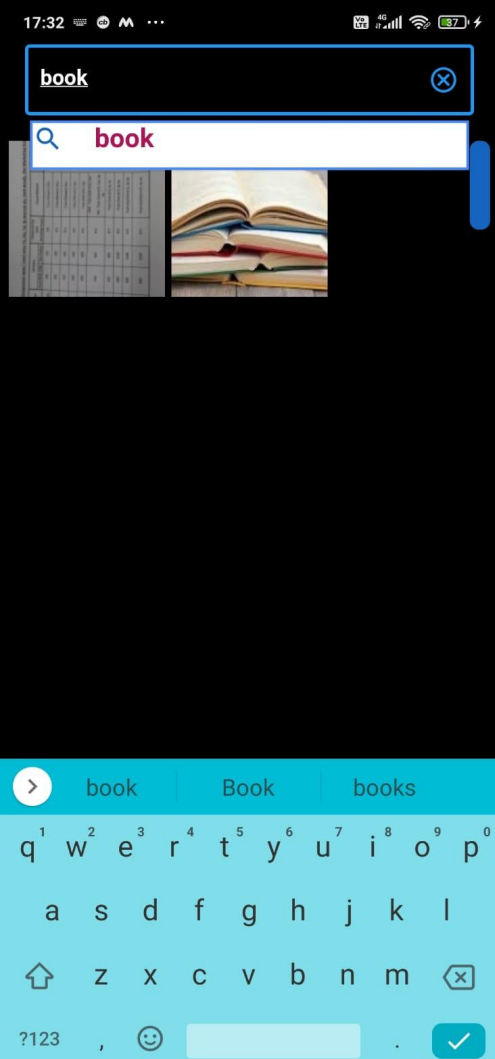
- For app , we have used the Flutter framework .
  - We have deployed our flask app in local host and accessing the local host in our phone by connecting both the phone and laptop with the same Wifi network.
  - We are uploading photos in the phone's gallery to the local host server and then storing the labels of all images in firestore.
  - We have implemented a search bar which shows suggestions from the labels of all the images
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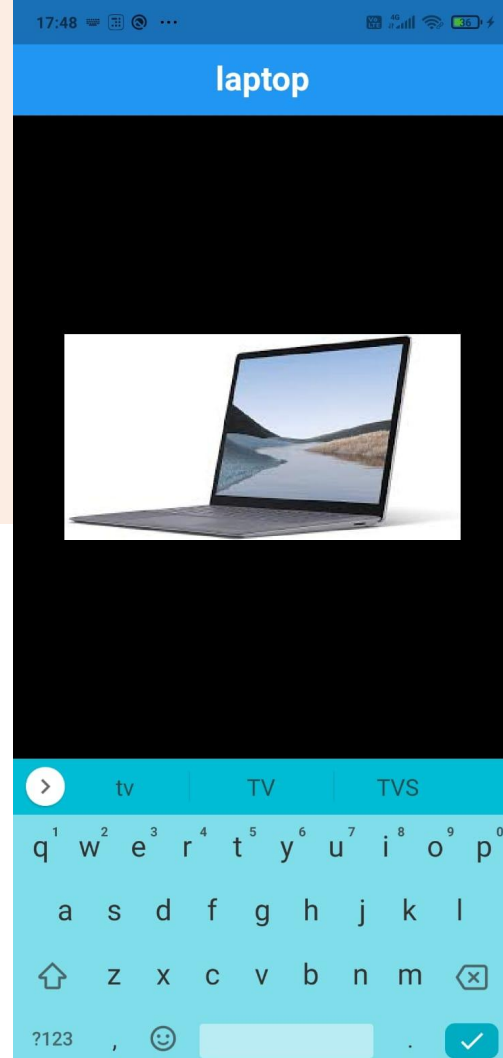
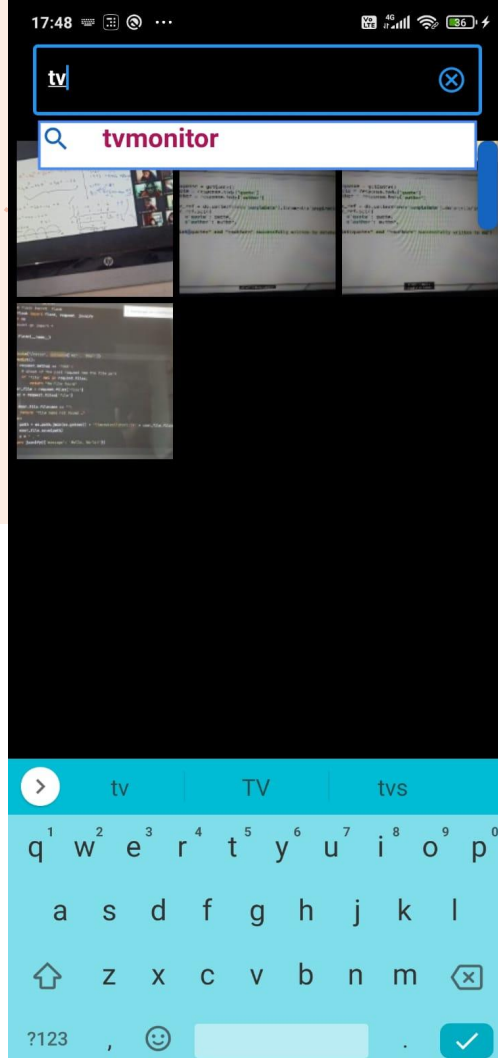
- ❖ Here when we searched for “**bicycle**” all the images in our gallery containing a “**bicycle**” are displayed.



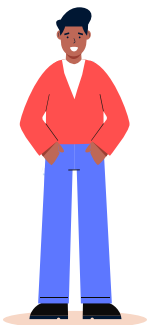


❖ Similarly here we searched for a “**book**”.

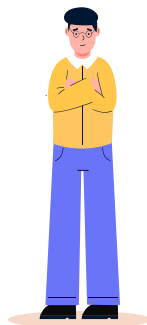




# Our team



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