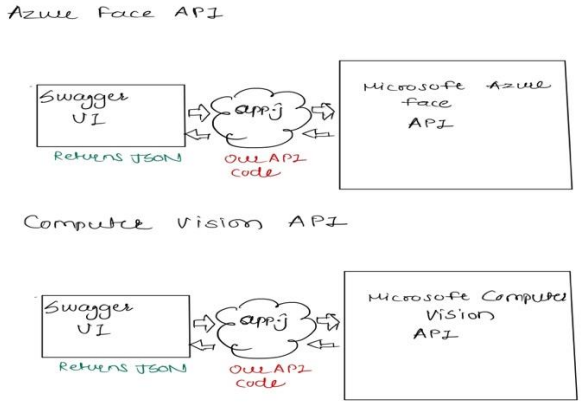
Documentation For Face API

API Name: Microsoft Azure Face API and Computer Vision API

This project uses Azure Face API for Face detection and Computer Vision API for Image analysis. The Azure Face service provides AI algorithms that detect, recognize, and analyze human faces in images. Facial recognition software is important in many different scenarios, such as identity verification, touchless access control, and face blurring for privacy.
Please refer: https://learn.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview-identity

Azure's Computer Vision service gives you access to advanced algorithms that process images and return information based on the visual features. The Image Analysis service extracts many visual features from images, such as objects, faces, adult content, and auto-generated text descriptions.
Please refer: https://learn.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview

How it works?



Required Technologies:

- Node.js
- Postman

Setup

- Create a free Azure account.
- Create a FaceAPI resource and Computer vision resource and get subscription key and endpoint.

Installation

- git clone
- cd Final-Project

User needs to create a .env file and paste following data
subscriptionKeyForFaceAPI= <your api key>
endpointForFaceAPI="https://facedemoshruti04.cognitiveservices.azure.com/face/v1.0/detect"
subscriptionKeyForCVAPI= <your api key>
endpointForCV="https://cvdemoshruti04.cognitiveservices.azure.com/vision/v3.2/analyze"

Install dependencies

- npm install

Start the application

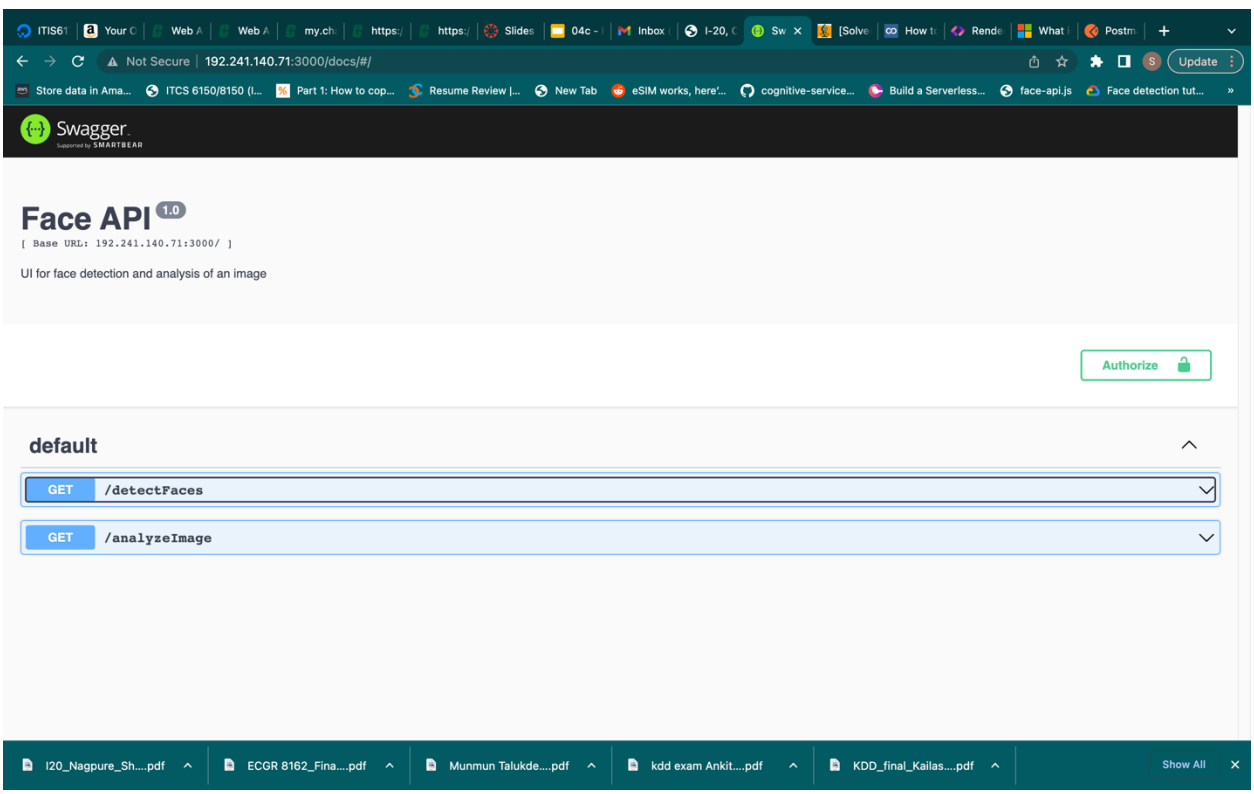
- node app.js

Testing and Using application

It can be tested on Postman at http://localhost:3000/
Usage: - There are two endpoints for this 2 API.

1. /detectFaces
2. /analyzeImage

To test application using swagger UI please access http://localhost:3000/docs



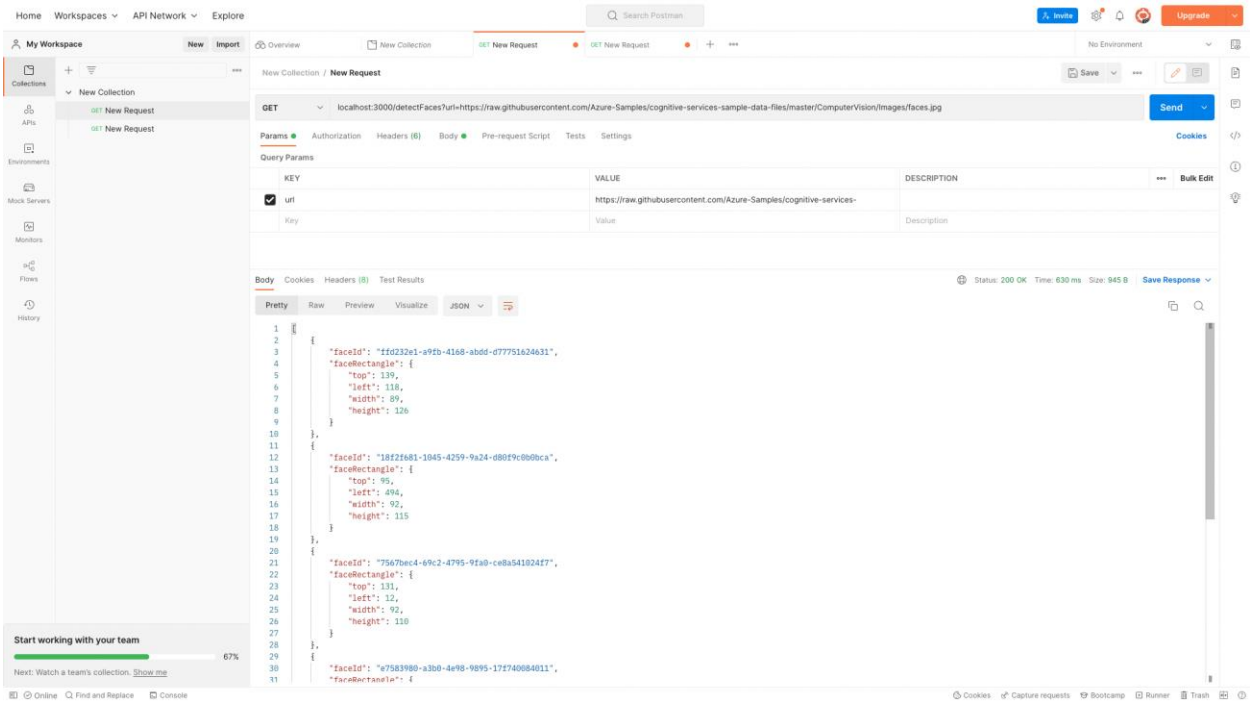
/detectFaces

This is an GET API which gives the faces detected in the given image in the form of rectangle values which is top, left, width and height. User needs to pass the imageUrl to get the response.

Image requirement:

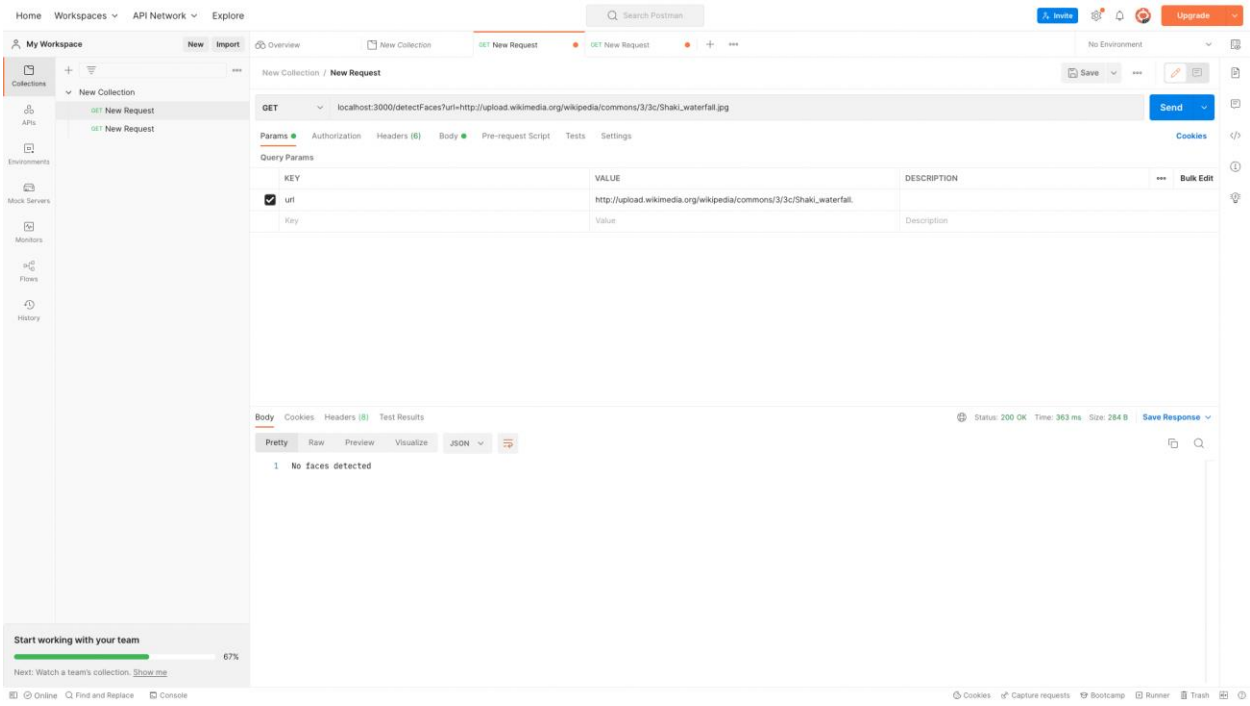
Image should be in the form of required format which is jpg,bmp,jpeg.
Image should be less than 4MB.
Dimensions of the image must be greater than 50 x 50 pixels and less than 16,000 x 16,000 pixels.

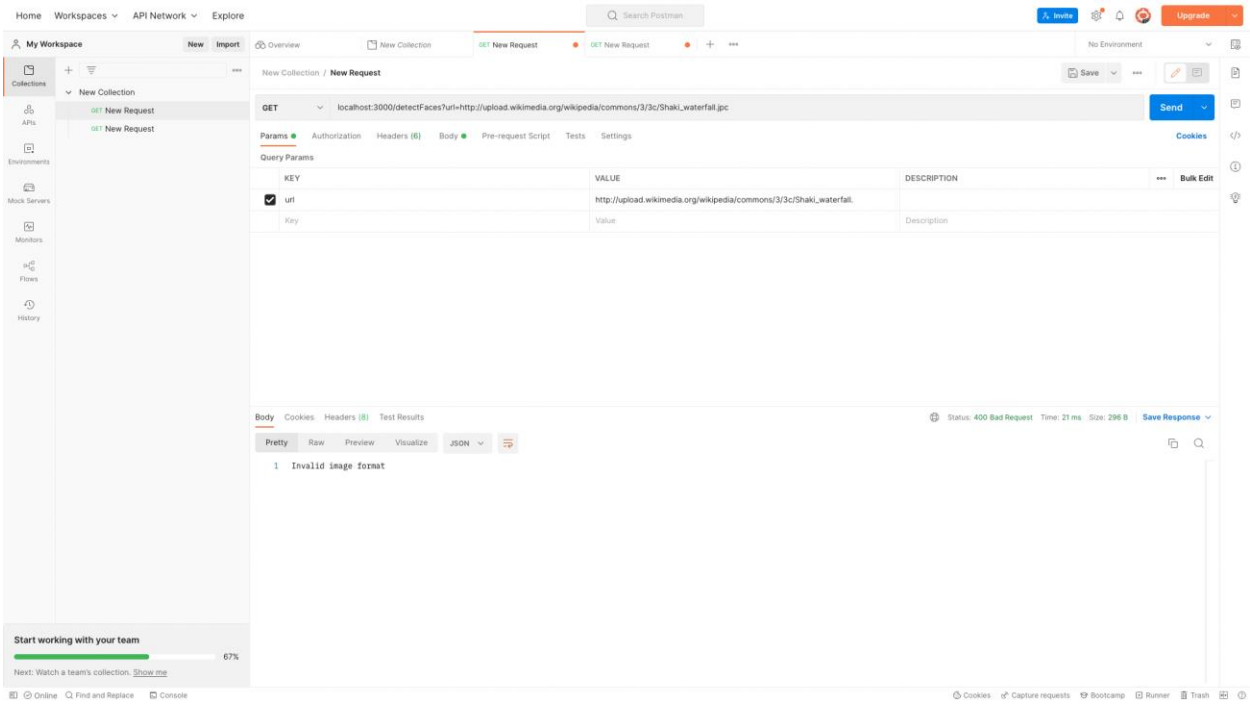
When user pass the required imageUrl in the request, server code calls the Azure face API and we can see the pixel values of the faces in the given image.



Handling edge cases:

If user pass the invalid image format or faces with no image then server code validates the image and shows below error.





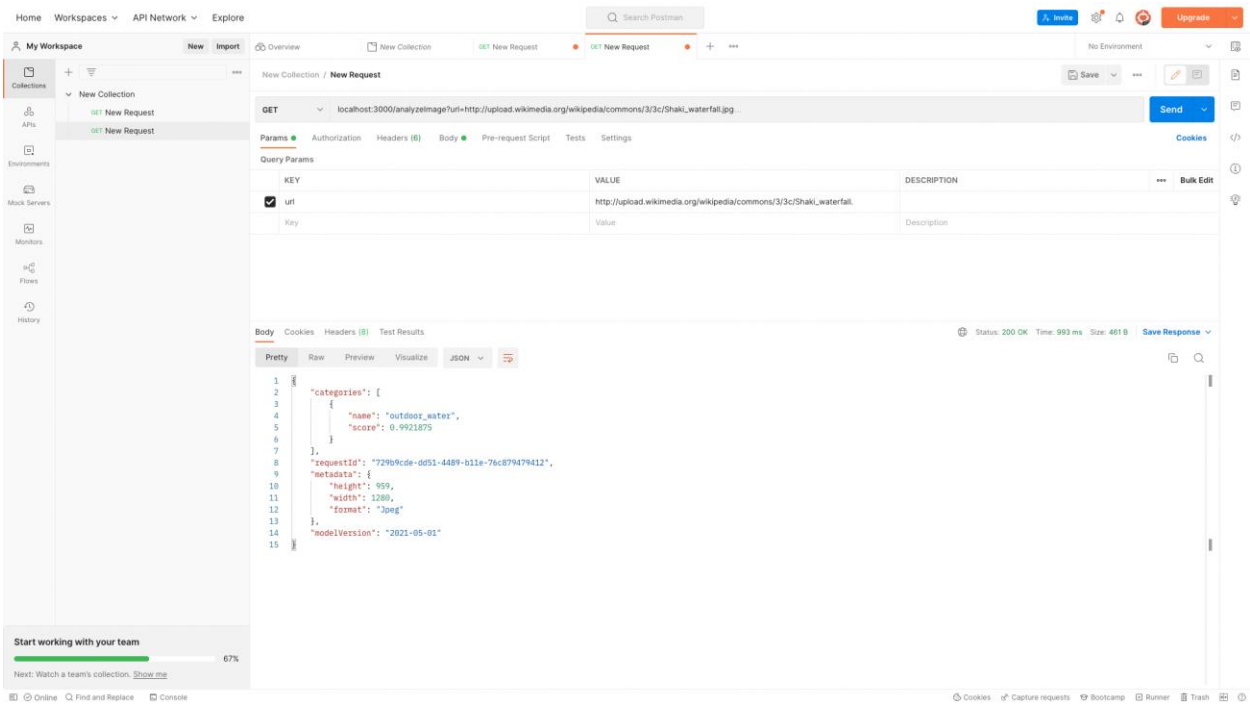
/analyzeImage

This is an GET API which gives the analysis of the given image in the form of description. User needs to pass the imageUrl to get the response. The server code uses Azure's computer vision API.

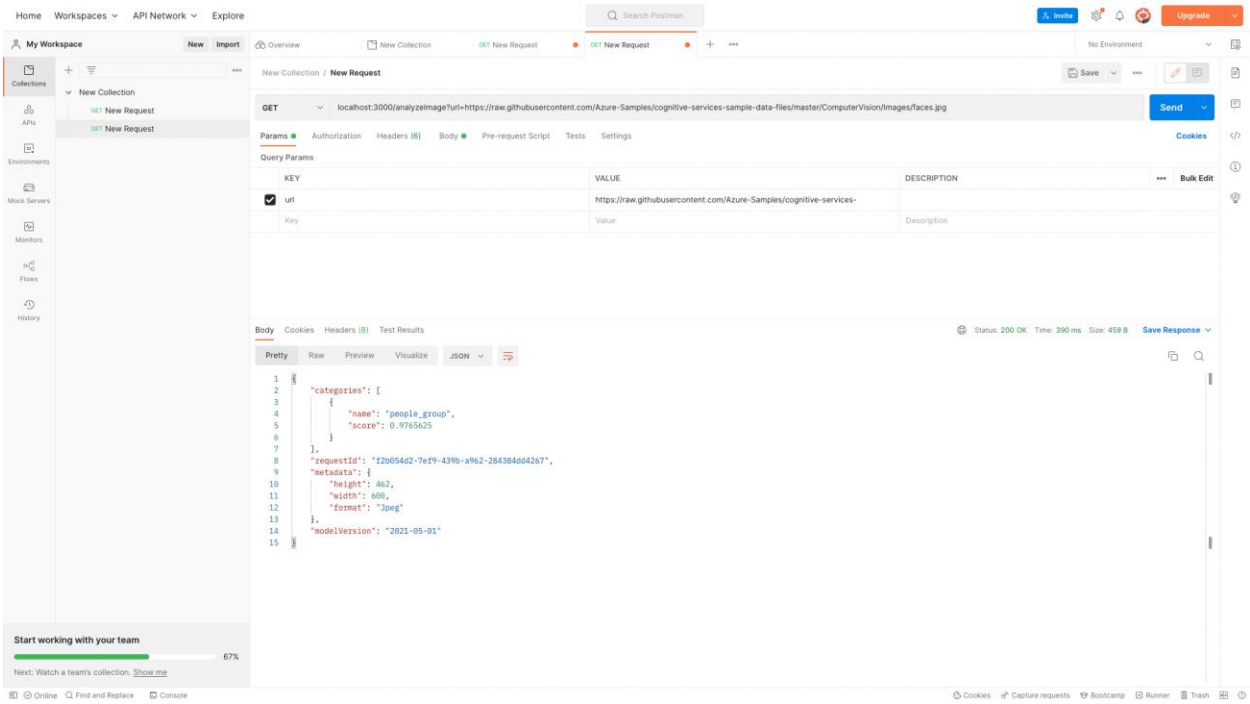
Image requirement:

Image should be in the form of required format which is jpg,bmp,jpeg.
Image should be less than 4MB.
Dimensions of the image must be greater than 50 x 50 pixels and less than 16,000 x 16,000 pixels.

When user pass the required imageUrl in the request, server code calls the Azure Computer vision API and we can see the description of the given image. It includes name and metadata for the given image in JSON format.

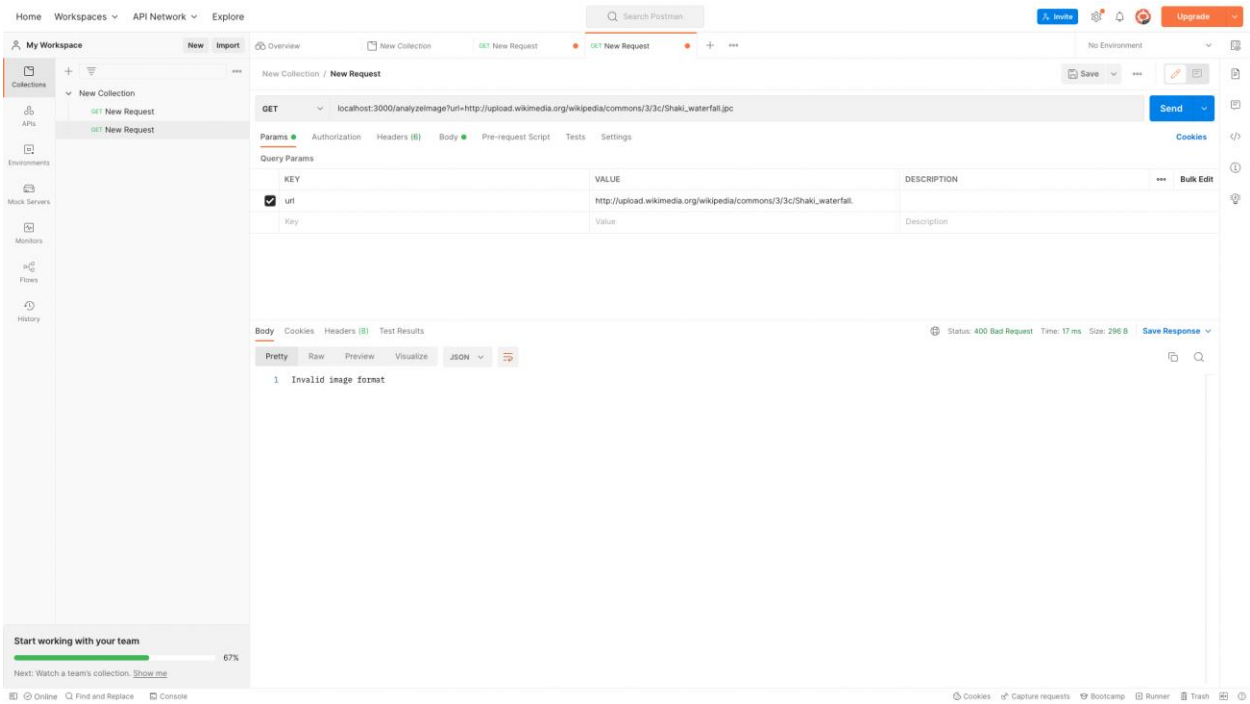


Passing the faces image:



Handling edge cases:

If user pass the invalid image format or faces with no image then server code validates the image and shows below error.



Reference:

Microsoft
Azure API
Swagger
Node.js
Postman