

# Flask REST API

REST APIs are

commonly used to expose Machine Learning (ML) models to other services. This folder contains an example REST API created using Flask to expose the YOLOv5s model from [PyTorch Hub](#).

## Requirements

Flask is required. Install with:

```
1 | $ pip install Flask
```

## Run

After Flask installation run:

```
1 | $ python3 restapi.py --port 5000
```

Then use [curl](#) to perform a request:

```
1 | $ curl -X POST -F image=@zidane.jpg 'http://localhost:5000/v1/object-detection/yolov5'
```

The model inference results are returned as a JSON response:

```
1  [
2    {
3      "class": 0,
4      "confidence": 0.8900438547,
5      "height": 0.9318675399,
6      "name": "person",
7      "width": 0.3264600933,
8      "xcenter": 0.7438579798,
9      "ycenter": 0.5207948685
10   },
11   {
12     "class": 0,
13     "confidence": 0.8440024257,
14     "height": 0.7155083418,
15     "name": "person",
16     "width": 0.6546785235,
17     "xcenter": 0.427829951,
18     "ycenter": 0.6334488392
19   },
20   {
21     "class": 27,
22     "confidence": 0.3771208823,
23     "height": 0.3902671337,
24     "name": "tie",
25     "width": 0.0696444362,
26     "xcenter": 0.3675483763,
27     "ycenter": 0.7991207838
28   },
29   {
30     "class": 27,
31     "confidence": 0.3527112305,
32     "height": 0.1540903747,
33     "name": "tie",
34     "width": 0.0336618312,
35     "xcenter": 0.7814827561,
36     "ycenter": 0.5065554976
37   }
38 ]
```

An example python script to perform inference using [requests](#) is given in `example_request.py`