

You're building an API that allows users to:

Info: please choose “a” or “b” depending on how comfortable you are with the subject (if you want you can of course do both :)

- a) tag images - user submits an image url and receives set of tags describing the image (pairs of feature: probability score)

Request:

```
import requests

response = requests.post(
    'http://example.com/tags',
    json={
        'url': 'https://cdn.filestackcontent.com/5IkgQW1tS56RAXPnLlFG'
    }
)
```

Response:

```
{
  "tags": {
    "sail": 95,
    "sailboat": 94,
    "water transportation": 92,
    "dinghy sailing": 92,
    "sailing": 86,
    "boat": 88,
    "sailing ship": 86,
    "scow": 84,
    "yaw1": 83
  }
}
```

- b) detect objects in the image - user submits an image url and receives a list of detected images with corresponding bounding boxes

Request:

```
import requests

response = requests.post(
    'http://example.com/objects',
    json={
        'url': 'https://cdn.filestackcontent.com/5IkgQW1tS56RAXPnLlFG'
    }
)
```

Response:

```
{
  'objects': {
    'boat': {
      'confidence': 90, # optional
      'bounding_box': {
        'x': 260,
        'y': 25,
        'width': 350,
        'height': 420
      },
      # crop_url is also optional, but useful for debugging :)
      'crop_url':
        'https://cdn.filestackcontent.com/crop=dim:[260,25,350,420]/5IkgQW1tS56RAXPnLlFG'
    }
    'something-else': { ... }
  }
}
```

Please use one of pretrained models that are available online.

Responses given above are just an example, tags/object names/confidence scores returned by your API can of course be different.

Additional requirements (do as many as you can)

1. Include unit/functional tests
2. Add authentication for your API (JWT/basic auth/something else? Choice is yours)
3. Sometimes users can submit two different urls that contain the same image (for example <https://cdn.filestackcontent.com/5IkgQW1tS56RAXPnLlFG> and <https://cdn.filestackcontent.com/JVAunkzQoGtxyWkrucej>). Add a caching mechanism that will allow your API to skip unnecessary image processing and just return cached result.
4. Prepare a Dockerfile so that it's easy to build your app and run it as a docker container