

# BIG DATA LAB

## ASSIGNMENT-6

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### FastAPI for MNIST Digit Prediction

a) 28x28 digit recognition

Digits and Responses :

1.



file \* required  
string(\$binary)  eight.png

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'content-type: multipart/form-data' \
  -F 'file=@eight.png;type=Image/png'
```

Request URL

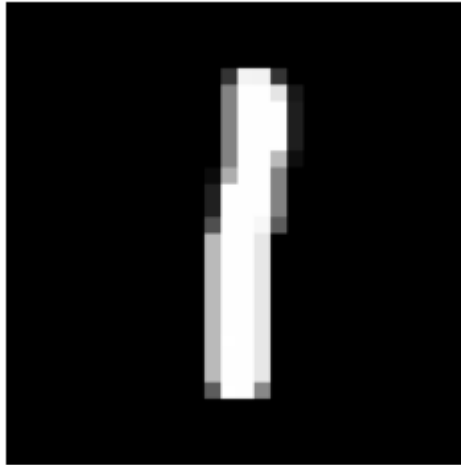
<http://localhost:8000/predict>

Server response

Code	Details
200	<p>Response body</p> <pre>{   "digit": "8" }</pre> <p><input type="button" value="Download"/></p>

Response headers

2.



file \* required  
string(\$binary)

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-type: multipart/form-data' \
  -F 'file=one.png;type=application/png'
```

Request URL

<http://localhost:8000/predict>

Server response

Code	Details
200	<p>Response body</p> <pre>{   "digit": "1" }</pre> <p><input type="button" value="Download"/></p> <p>Response headers</p>

b) Resize and Predict

Correct Predictions:



file \* required  
string(\$binary)  1.png

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'file=@1.png;type=Image/png'
```

Request URL

http://localhost:8000/predict

Server response

Code	Details
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file \* required  
string(\$binary)  3.png

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'file=@3.png;type=Image/png'
```

Request URL

http://localhost:8000/predict

Server response

Code	Details
200	<p>Response body</p> <pre>{   "digit": "3" }</pre> <p>Response headers</p>

Incorrectly predictions:



file \* required  
string(\$binary)  6.png

Responses

Curl

```
curl -X "POST" \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'file=@6.png;type=image/png'
```

Request URL

http://localhost:8000/predict

Server response

Code	Details
200	<p>Response body</p> <pre>{   "digit": "5" }</pre> <p><input type="button" value="Download"/></p>

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file \* required  
string(\$binary)  7.png

Responses

Curl

```
curl -X "POST" \
  'http://localhost:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'file=@7.png;type=image/png'
```

Request URL

http://localhost:8000/predict

Server response

Code	Details
200	<p>Response body</p> <pre>{   "digit": "5" }</pre> <p><input type="button" value="Download"/></p> <p>Response headers</p> <pre>Content-Type: application/json</pre>

## OBSERVATIONS:

- Model is predicting correctly only if the background is black and digit is written in white.
- Model fails to predict digits correctly when the background colors are changed.
- It is possibly due to different Grayscale values we get for different colors.