

Practical-02

MLT_Practicals/practical2/assign... X

MLNST CNN - Client Side (Single F... X

New tab X

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127.0.0.1:5500/practical_02/digit_recognition.html

Summarize 🔍 🌐 ⚙️ 🏠 📄 🗨️ Chat

MNIST Digit Recognition using CNN (Client Side)

TensorFlow.js loaded using jsDelivr CDN | Training: 5 Epochs


1) Train & Test Model

Train Model (5 Epochs)

Test Accuracy

Status: Training started...

2) Draw Digit & Predict



Clear


Predict

Prediction: -

Logs / Output


```
loading MNIST dataset...
building CNN model...
training started (5 epochs)...
```

Visualization



24°C Clear

Search



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Clear

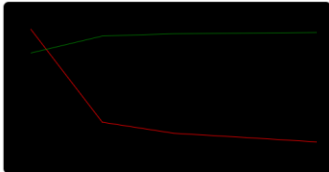
Predict

Prediction: 1

Logs / Output

```
loading MNIST dataset...
building CNN model...
training started (5 epochs)...
Epoch 1 -> loss=0.5954, acc=81.72%
Epoch 2 -> loss=0.1700, acc=94.74%
Epoch 3 -> loss=0.1195, acc=96.51%
Epoch 4 -> loss=0.1000, acc=96.97%
Epoch 5 -> loss=0.0797, acc=97.49%
Training completed successfully
Predicted Digit: 1
```

Visualization



Console

Flatten Flatten1 (Flatten) [[null,5,5,64]] layer_utils.js:152
[null,1600] layer_utils.js:74

dense_Dense1 (Dense) [[null,1600]] layer_utils.js:152
[null,128] 204928 layer_utils.js:74

dropout_Dropout1 (Dropout) [[null,128]] layer_utils.js:152
[null,128] 0 layer_utils.js:74


dense_Dense2 (Dense) [[null,128]] layer_utils.js:152
[null,10] 1290 layer_utils.js:74
----- layer_utils.js:83
Total params: 225034 layer_utils.js:84
Trainable params: 225034 layer_utils.js:85
Non-trainable params: 0 layer_utils.js:86

Training started (5 epochs)... digit_recognition.html:91
Epoch 1 -> loss=0.5954, acc=81.72% digit_recognition.html:91
Epoch 2 -> loss=0.1700, acc=94.74% digit_recognition.html:91
Epoch 3 -> loss=0.1195, acc=96.51% digit_recognition.html:91
[NEW] Explain Console errors by using Copilot in Edge: digit_recognition.html:91
click to explain an error. Learn more Don't show again
Epoch 4 -> loss=0.1000, acc=96.97% digit_recognition.html:91
Epoch 5 -> loss=0.0797, acc=97.49% digit_recognition.html:91
Training completed successfully digit_recognition.html:91
Predicted Digit: 1 digit_recognition.html:91

Console Issues +

Air: Satisfactory Friday

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MLTL_Practical/practical2/assign... MNIST CNN - Client Side (Single / ... New tab

127.0.0.1:5500/practical_02/digit_recognition.html

MNIST Digit Recognition using CNN (Client Side)

TensorFlow.js loaded using jsDelivr CDN | Training: 5 Epochs


1) Train & Test Model

Train Model (5 Epochs)

Test Accuracy

Status: Testing complete

2) Draw Digit & Predict



Clear

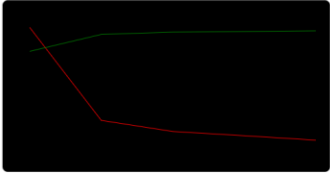
Predict

Prediction: 4

Logs / Output

```
Training started (5 epochs)...
Epoch 1 => loss=0.5954, acc=81.72%
Epoch 2 => loss=0.1700, acc=94.74%
Epoch 3 => loss=0.1195, acc=96.51%
Epoch 4 => loss=0.1000, acc=96.97%
Epoch 5 => loss=0.0797, acc=97.49%
Training completed successfully
Predicted Digit: 0
Canvas cleared.
Predicted Digit: 3
Canvas cleared.
Predicted Digit: 4
Canvas cleared.
Predicted Digit: 4
Canvas cleared.
Predicted Digit: 4
Testing started...
Final Test Accuracy: 98.46%
```

Visualization



Summarize

Console

Default levels No Issues 2 hidden

Total params: 225834 layer_utils.js:83
Trainable params: 225834 layer_utils.js:84
Non-trainable params: 0 layer_utils.js:85
layer_utils.js:86

Training started (5 epochs)... digit_recognition.html:91
Epoch 1 => loss=0.5954, acc=81.72% digit_recognition.html:91
Epoch 2 => loss=0.1700, acc=94.74% digit_recognition.html:91
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Epoch 5 => loss=0.0797, acc=97.49% digit_recognition.html:91
Training completed successfully digit_recognition.html:91
Predicted Digit: 1 digit_recognition.html:91
Canvas cleared. digit_recognition.html:91
Canvas2D: Multiple readback operations using getImageData are faster with the willReadFrequently attribute set to true. See: https://html.spec.whatwg.org/multipage/canvas.html#concept-canvas-will-r... digit_recognition.html:458
Predicted Digit: 0 digit_recognition.html:91
Canvas cleared. digit_recognition.html:91
Predicted Digit: 3 digit_recognition.html:91
Canvas cleared. digit_recognition.html:91
Predicted Digit: 4 digit_recognition.html:91
Canvas cleared. digit_recognition.html:91
Predicted Digit: 4 digit_recognition.html:91
Canvas cleared. digit_recognition.html:91
Predicted Digit: 4 digit_recognition.html:91
Testing started... digit_recognition.html:91
Final Test Accuracy: 98.46% digit_recognition.html:91

Console Issues +

Air: Satisfactory Friday

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