

Assignment 12

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Exercise 1

- i. 70000
- ii. 28x28
- iii. 10 classes

Exercise 2

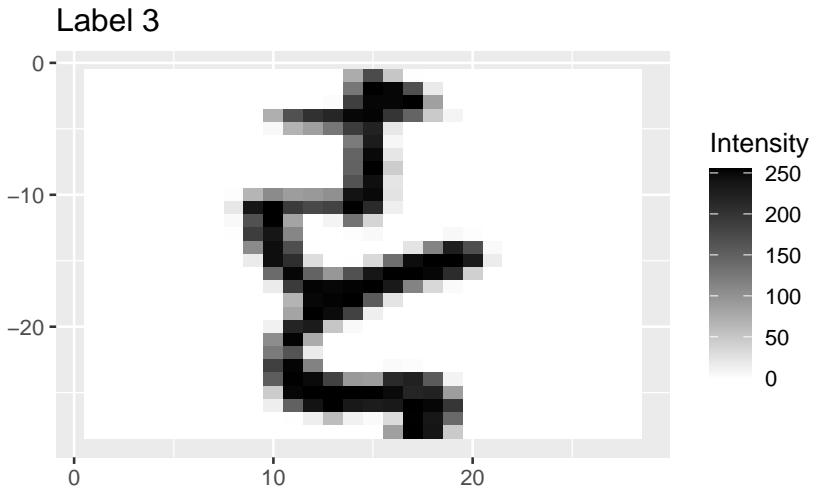
```
train_dl <- dataloader(  
  dataset = train_ds,  
  batch_size = 32,  
  shuffle = TRUE  
)
```

Exercise 3

```
## [1] 32 784
```

Exercise 4

-The image corresponds to the character “re.”-



Exercise 5

```
valid_dl <- dataloader(
  dataset = valid_ds,
  batch_size = 32,
  shuffle = FALSE
)

test_dl <- dataloader(
  dataset = test_ds,
  batch_size = 32,
  shuffle = FALSE
)
```

Exercise 6

```
net <- nn_module(
  initialize = function() {
    self$fc1 <- nn_linear(784, 128)
    self$fc2 <- nn_linear(128, 10)
  },
  forward = function(x) {
    x %>%
      self$fc1() %>%
      nnf_relu() %>%
      self$fc2()
  }
)
```

Exercise 7

Exercise 8

Exercise 9

Exercise 10