

Assignment 12

MinJae Jo

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Exercise 1

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

Exercise 2

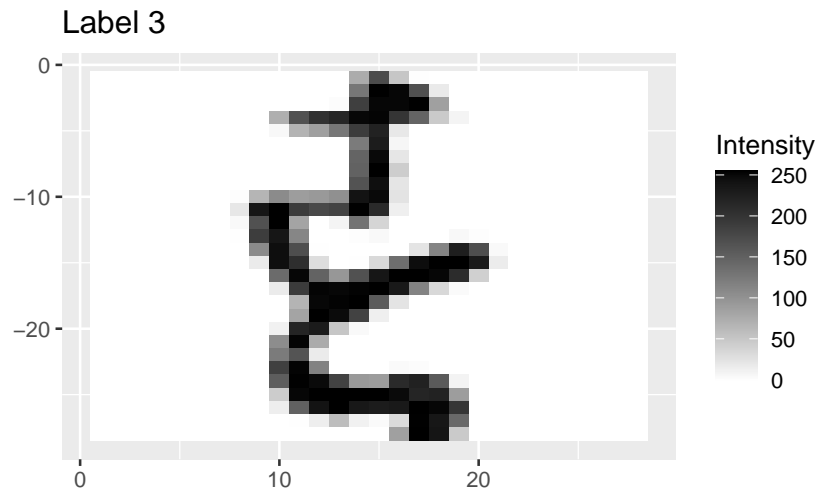
```
train_dl <- dataloader(  
  dataset = train_ds,  
  batch_size = 32,  
  shuffle = TRUE  
)
```

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