

Christopher Chen

https://github.com/compscichris/CSCI611_Summer25_Chris_Chen

It took me a while to be able to understand this assignment, as the math and the functions were a little difficult. However, I was able to create the CNN successfully (I think). The first result, I ignored using dropout, and stuck to SGD, which yielded an average of 54% accuracy, vs second result with Adam, which yielded 47% accuracy.

```
# specify optimizer
```

```
optimizer = optim.SGD(model.parameters(), lr=0.01)
```

```
#optimizer2 = optim.Adam(model.parameters(), lr=0.01)
```

Then I enabled dropout to see other results.

Dropout enabled SGD with same params = 49%

Dropout enabled Adam with same params = 42%

Then, I changed parameters to lower learning rate.

Dropout enabled SGD with new params = ???

Dropout enabled Adam with new params = 56%

```
optimizer = optim.SGD(model.parameters(), lr=0.001)
```

```
optimizer = optim.Adam(model.parameters(), lr=0.001)
```

I am writing this a few minutes before submission, as I found the lab difficult and ran out of time to do extensive testing. I was unable to get it to a 70% success rate overall, but I believe that the pattern is smaller learning rate = better success accuracy, and dropout can affect the accuracy as well. I will submit update report on github, but this is all I believe I can do for now.