

MLFA LAB

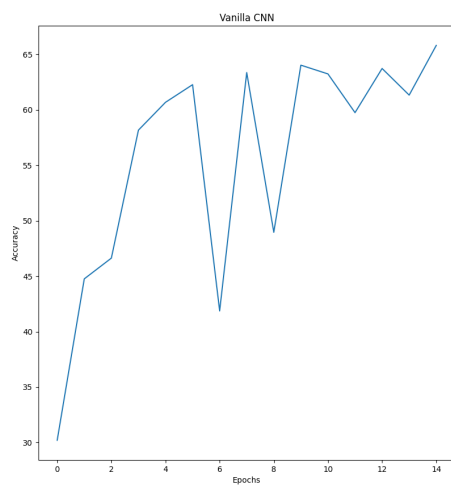
Assignment - 6

Name: Aryan Satpathy

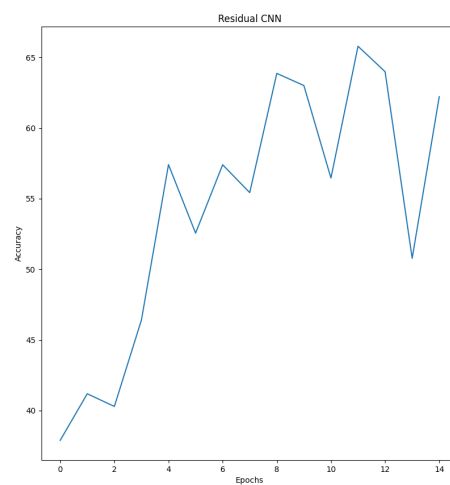
Roll: 20EC10014

Experiment 1

Residual turns out to be **slightly better than Vanilla CNN**.



(a)

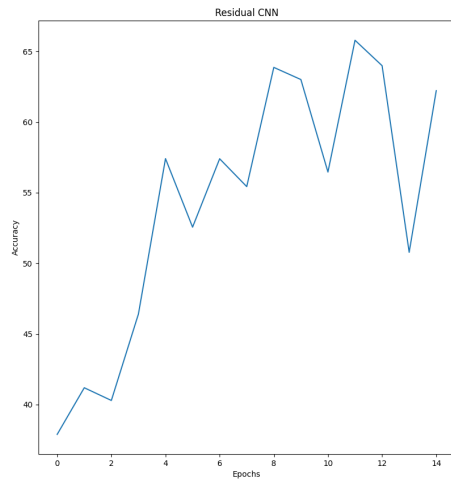


(b)

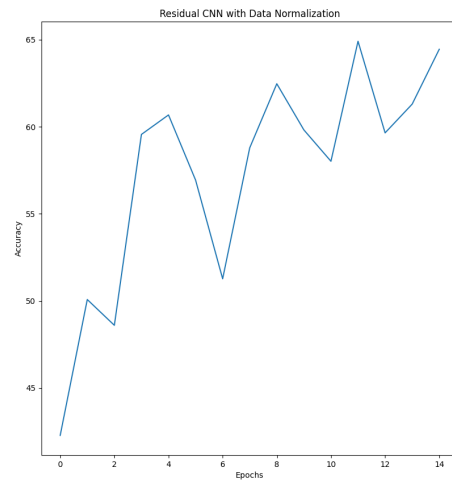
Figure 1: Vanilla CNN(a) v/s Residual CNN(b)

Experiment 2

Performance is **better in Normalized Data** as compared to Un-Normalized Data.



(a)

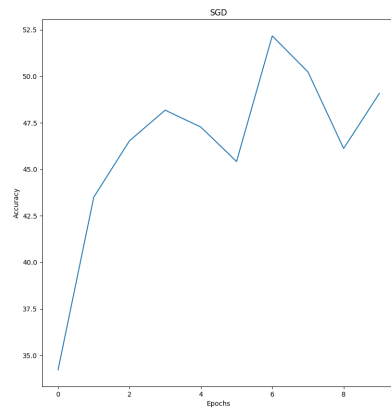


(b)

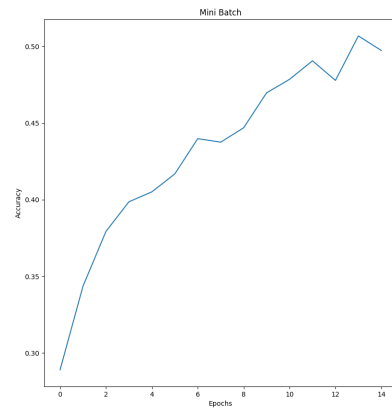
Figure 2: Un-Normalized(a) v/s Normalized(b)

Experiment 3

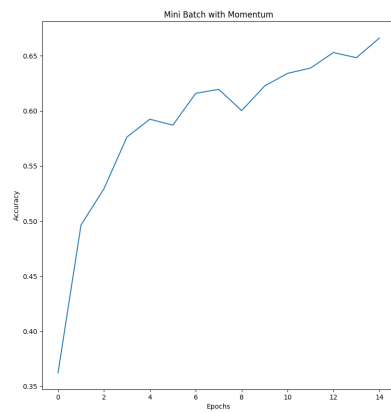
Comparison between optimizers:



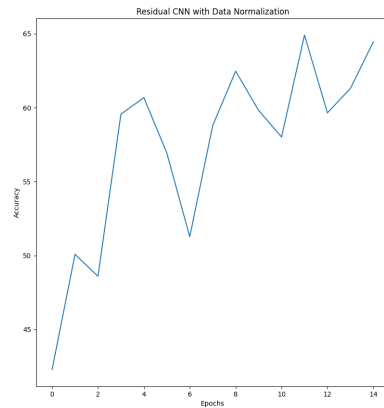
(a)



(b)



(c)



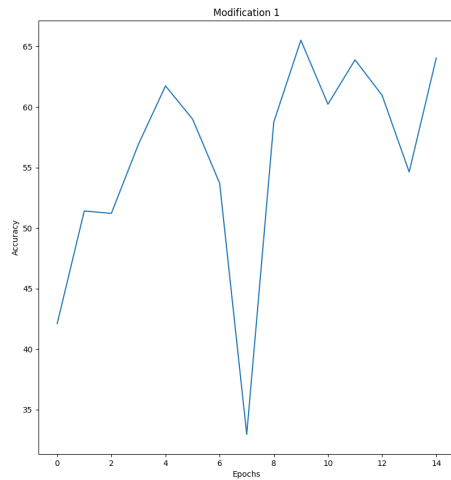
(d)

Figure 3: SGD(a), Mini Batch(b), Momentum(c), Adam(d)

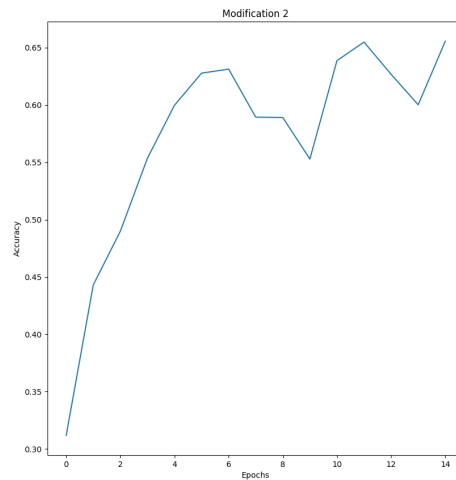
As we can see, **Minibatch with Momentum is the best.**

Experiment 4

Comparison between modifications:



(a)



(b)

Figure 4: Modification 1(a) v/s Modification 2(b)

Modification 2 is better.