SMAI Assignment 2 Question 2

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Dropout

- Without dropout, after one epoch validation accuracy : 21.26%
- With dropout, after one epoch validation accuracy : 25.88%

Batch Normalization

- Without batch normalization, training was slow. After one epoch, validation accuracy : 25.88%.
- With batch normalization, training speeds up. After one epoch, validation accuracy : 34.67%.

Activation Functions

- tanh is almost equaivalent to sigmoid.
- ReLu is better than above both.

- My code is gaining 50% accuracy on validation dataset after 2 epochs. Since I don't have GPU, I haven't done parameter optimization on final results. I have designed architecure based on my understanding of the domain and reading from several resources. Few optimizations are done on smaller dataset with 1-2 epochs like time to run one epoch etc.