NVIDIA DEEP LEARNING

GPU TASK 1 :
- This task explains the difference between Machine Learning and Deep Neural Networks.
- It explains the functioning of deep neural networks in the simplest form with Louie classifier example.
- It explains various applications of deep neural networks in real world problems.
- Digits platform was introduced in this task to build a model which classifies the images whether it is Louie or not.
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No	Model	No of epochs	Result(Classifying as Louie)%
1	Alexnet	3	48.4
2	Lenet	3	100
3	GoogleNet	3	63.4
4	Lenet	50	100
5	Alexnet	50	55.6
6	GoogleNet	50	96.49

- Lenet gave the maximum accuracy but it works only with grey scale images.
- With an increase in no of epochs accuracy increased but when the model was tested with other images the model failed to classify them correctly this was due to overfitting of the model as the data is small.

GPU TASK 2:

- Task 2 mainly deals with overfitting issues by training the model with large data sets.
- Task 2 introduces us to data set creation in Digits platform and explains how to use the data sets created in training a model.
- The data was used and models were built the results are as follows

Model	No of epocs	Train loss	Val loss	Val accuracy	Result(classifying Louie)%
Alexnet	5	0.5	0.45	80	88.2
Google Lenet	5	0.8	0.9	70	69

- Alexnet is hence proved to be the best model for classifying the images.

GPU TASK3:
- Task 3 mainly deals with deploying the model useful for the end user.
- Explains how to give inputs to the network, The way it expects.
- Converting the output which the model gives into a format which the user can understand.
- To read and process the saved models we need an architecture which can understand and use these models built. So Caffe architecture was introduced in this task.
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