Report of Pytorch Experiments:

First Experiment:

With GPU

It Takes About 5 min

A screen shot of a computer

Description automatically generated with medium confidence

Here we change the hyperparameters as a try to improve the results:

We change :

max-iters =5000

The maximum number of training iterations or steps. The training loop will run for 5000 steps in this case This allows the model to train for a longer duration, potentially capturing more patterns and improving performance. However, be cautious of overfitting if you increase the number of iterations too much.

As We change:

eval\_interval = 100

The number of evaluation iterations. It specifies how many evaluation steps are performed during validation.

learning\_rate = 1e-2

The learning rate determines the step size used in updating the model's parameters during training. Here, it is set to 0.01 (1e-2).

Then we get the output as :

A screenshot of a computer

Description automatically generated with medium confidence

the training and validation loss values

decrease as the training progresses, which is a positive sign. It suggests that the model is learning and improving over time.

The decreasing loss values indicate that the model is minimizing the difference between its predicted outputs and the actual expected outputs.

Second Experiment

With CPU

It takes about 8 mins

A screen shot of a computer

Description automatically generated with low confidence

We here change the learning rate to 1e-3 to optimize the result

A screenshot of a computer

Description automatically generated with medium confidence

the training and validation loss values

decrease as the training progresses, which is a positive sign. It suggests that the model is learning and improving over time.

The decreasing loss values indicate that the model is minimizing the difference between its predicted outputs and the actual expected outputs.

But we find that the loss in the end of our first experiment is decreases more >>