GNNs for LUXE particle tracking
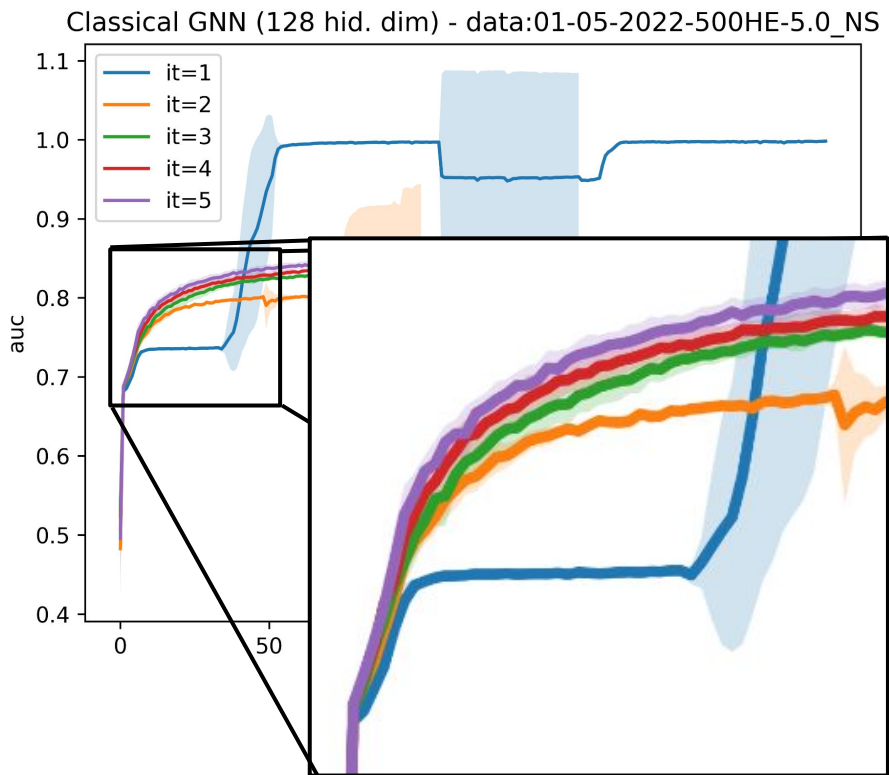
Status update

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02 May 2022

Training results

Results with 100 BX

With new data we see the same problem with iterations.

Iter=1 can reach to 1.0 AUC with a sudden jump. I can't find how it can do this :D

Then, if we look at other iterations they seem to follow a pattern, which is improvement with more iterations.

Classical GNN (128 hid. dim) - data:01-05-2022-500HE-5.0_NS

Training results

What causes the jump?

I think the jump is caused by the low precision at the beginning.

Precision is the ratio of the true tracks within our "true" predictions.

The efficiency of the dataset is 0.15 at the moment. This means a random model would start from a 0.15 precision value.

But this still doesn't explain why we see a sudden jump.

If we can find out how this happens, we might reach to 1.0 AUC faster with more iterations.

Classical GNN (128 hid. dim) - data:01-05-2022-500HE-5.0_NS