

Accelerating RHIC Science w/ AI/ML

Topics for discussion session

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RHIC/AGS AUM 2022

Tuesday June 7th

Inference

1. Deep learning inference is the process of using a trained DNN model to make predictions against previously unseen data.

What do we learn from a particularly trained ML model?

Is training on a monte carlo model a strict in our learning or can we learn more from simulation based inference

What about directly learning from data - anomaly detection?

Uncertainties

2. Uncertainties - Can we quantify an inherent uncertainty or any potential biases introduced due to the choice of model/ optimization?

- How to identify the biases in a model architecture or training method
- Uncertainties from the perspective of a physics measurement? Inherent vs application based variations

Community

3. multi-faceted - How approachable is the field for newer students?

Conversely, is our field receptive to these ML ideas? At the different levels of hierarchy from funding agencies to (under)graduate students

What can the RHIC community gain by employing these methods in our studies?

What kind of (software or otherwise) ecosystem can we develop to facilitate the experimentation and applications of ML in RHIC science?