



NITheCS

National Institute for
Theoretical and
Computational Sciences

NITheCS Mini-school

Tuesdays, June 2021 @ 14h00

“Machine Learning in High Energy Theory”



Machine Learning as a Discovery Tool in hep-th

8 June 2021, 14h00

Prof Vishnu Jeyjala
School of Physics, WITS

We present examples of the application of machine learning to problems in string geometry, quantum field theory, and mathematics. Based on these examples, we discuss current and future research directions in string data.

Mathematics of Deep Learning

15 June 2021, 14h00

Anirbit Mukherjee
Dept. of Statistics, University of Pennsylvania

We discuss how we can understand deep learning more rigorously. We introduce a few very simple networks with commonly used activators like ReLU and sigmoid activation and discuss why learning is possible with those setups.

Basics of Machine Learning (I and II)

22 & 29 June 2021, 14h00

Pallab Basu, School of Physics, WITS

I introduce the basics of machine learning and its application in physics. We discuss how to construct a DNN and CNN and apply them in the Ising model near the phase transition. I also introduce how to tackle deep learning problems using pytorch and jupyter notebook.

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Or register at: <https://bit.ly/34IzhLe>

WANT TO FIND OUT MORE?

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