Daniel Adamiak/Artemiy Filippov – HEP seminar – February 24, 2026
MSU

Title:
Investigating the phenomenon of double descent in cross-validation

Abstract:
When cross-validating models, it is common knowledge that adding more and more parameters to your model leads to overfitting. This overfitting is made evident by the error of the cross-validation set blowing up. What is strange is that, as you continue to add even more parameters, crossing the interpolation threshold where the number of parameters equals the number of data points, the cross-validation error actually comes back down again. This is known as "double descent". In this talk, we will reveal the mathematical origins of this phenomenon, as well as present a computational tutorial that lets you explore double descent yourself.