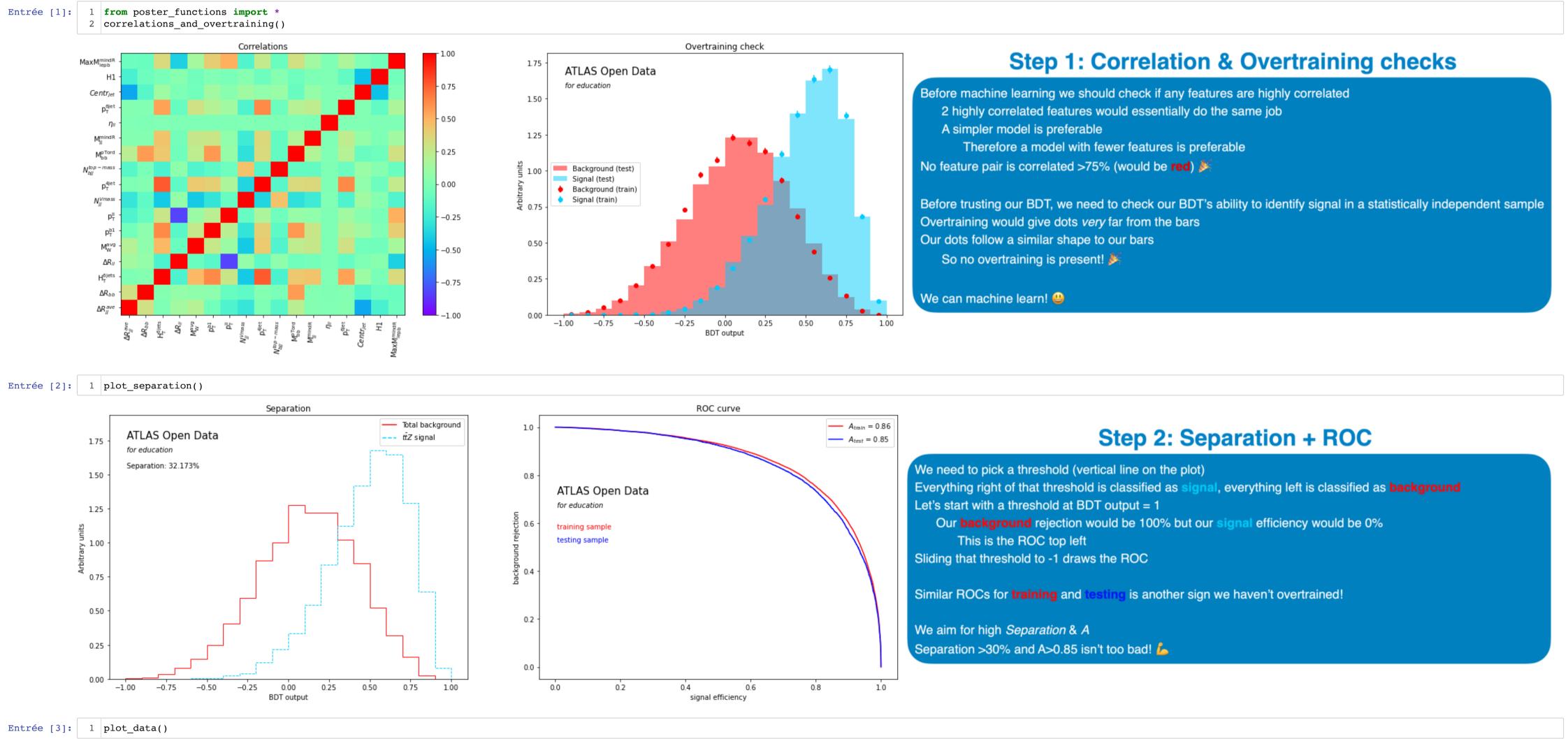
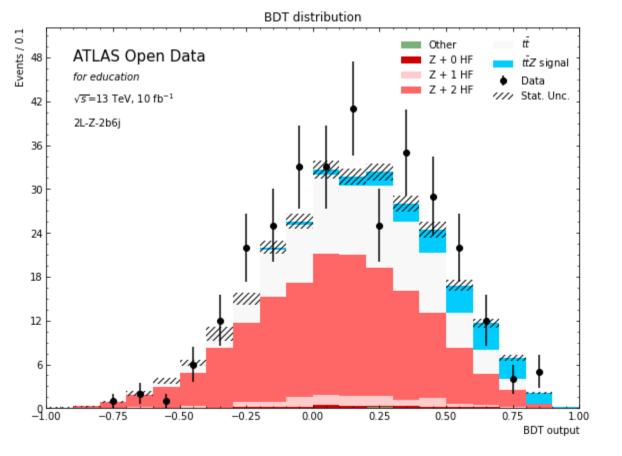


Can we probe a rare LHC process with standard Python tools & educational open data?

Let's go through the general steps of a machine learning problem





Step 3: Applying to unseen Data

When stacking all processes, signal lies more towards the right
When applying to unseen experimental Data, a similar shape is found compared to the total stack
With a well separated BDT output that describes unseen Data, we can make precise statements about how many Data events are signal or background!

The answer to our questions is yes
We can probe a rare LHC process with standard Python tools & educational open data!





UNIVERSITY OF SUSSEX



[2] ATLAS Collaboration, ATL-OREACH-PUB-2020-001
[3] M.O.Evans, ATL-OREACH-PROC-2020-006



