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The L-CAPE Project at FNAL

Thursday, March 7, 2024 10:20 AM (20 minutes)

The Linac Condition Anomaly Prediction Emergence Project (L-CAPE) at Fermilab National Accelerator Lab (FNAL) seeks to apply data-analytic methods to improve the information available to MCR Operators and to automate the task of labeling Linac outage types as they occur by recognizing patterns in real-time machine data. Predicting outages in a credible manner could provide useful information for managing the impact of the outage on the other accelerators in the complex thereby minimizing downtime and leading to potential energy savings. An overview of the methods and challenges of gathering machine data via the existing Accelerator Controls system for training, developing, and deploying an ML model will be discussed.

Primary Keyword

failure prediction

Secondary Keyword

timeseries forecasting

Tertiary Keyword

MLOps

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