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Model up-keep with continual learning

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Particle accelerators are dynamic machines and pose a major challenge for scientists at the intersection of nuclear physics and machine learning (ML) with evolving operational conditions and data drift. Traditional ML models trained on historical data can fail to provide good predictions on future data. They fall short in adapting to dynamic distributions. This tutorial introduces the particle accelerator community to continual learning techniques to address this challenge. The tutorial covers fundamentals of concept/data drift, drift detection, continual learning, online learning for model-upkeep, transfer learning along with potential practical use cases.

Primary Keyword

Secondary Keyword

Tertiary Keyword

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