



Heterogeneous Data and Large Representation Models in Science

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Small thinks big: transfer learning in KM3NeT/ORCA for neutrino event reconstruction

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This study explores using transformer models to analyze data from the KM3NeT/ORCA neutrino detector. Due to the current detector's size, reconstructing neutrino events is challenging. By training models on simulations for the full detector (115 detection units) and fine-tuning them on smaller configurations, significant performance improvements are achieved compared to models trained from scratch on very limited data. This approach also helps estimate the detector's sensitivity as it grows.

Contribution length

Middle

Primary author: MOZUN, Ivan

Presenter: MOZUN, Ivan