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## Optimisation of the ATLAS Deep Learning Flavour Tagging Algorithm

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The identification of heavy flavour jets (tagging) plays an important role in many physics analyses at the ATLAS experiment. It is an essential tool for precision measurements as well as for searches for new physics phenomena. Significant progress has been made in the last few years to ensure the robust training of deep neural networks, requiring large training datasets.

The ATLAS deep learning tagger framework (DL1) uses deep neural networks based on TensorFlow and Keras to distinguish b-, c-, and light-flavour jets using inputs from ATLAS's low-level b-taggers. The latest optimisation of the DL1 tagger on Particle Flow jets and Variable-Radius Track jets shows substantial improvement with respect to the previously available taggers. An introduction to the DL1 framework, the training procedure, as well as the resulting performance improvements will be shown.

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