

## On the potential of machine learning in science operations

Machine learning is today a buzzword that we hear almost everywhere. Even though the field has existed since the early twentieth century, it is only recently that developments in it have proven to be useful enough to be adopted and pushed forward by large commercial players like Google and Facebook for the automatic processing of datasets much too large to be handled adequately by hand. Science operations is a unique area where many decisions and actions can have a critical impact on instruments and platforms be they ground or space based. For this reason, it is natural that much caution is paid to such critical procedures, and careful considerations by several people is typically involved in implementing these decisions or actions. Most of the activities involved in science operations, however, do not typically carry such a level of criticality that they couldn't be delegated to machines, especially because any task or algorithm can be tested as long and as thoroughly as is needed to make them as reliable as is needed. Here we examine and discuss machine learning techniques that could be applied to an array of various tasks performed in science operations. This has many implications for coordination between observatories.