Machine Learning Project

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Abstract

This academic project, supervised by Dr. Hanoune, aimed to master fundamental concepts in machine learning. It involved completing four case studies, along with a few additional tasks. The first project focused on classification and regression, the second on image classification, the third on unsupervised learning, and the last on object detection and segmentation. Additionally, participants were tasked with implementing classification and regression using AdaBoost, as well as developing a convolution algorithm from scratch, including stride and padding. These projects were completed and documented on our GitHub repository, which can be found at the following link: link to the project's GitHub. In the remainder of this report, we will explain our choice of algorithms used and present the results obtained.

1 Introduction