

This thesis examines using different genetic programming encodings and analyses if they can be used for classification machine learning tasks. We introduce Evolutionary Algorithms and their basic concepts as well as define our specific branch Genetic Programming that is used to generate formulas instead of a differently encoded parametric solution. We introduce Cartesian and Tree-Based encodings and operations on them needed for the algorithm to function properly. The proposed algorithms are implemented and their performance is tested and their results compared on multiple datasets. We then describe how to build and run our solution and discuss the results of the experiments.