QFC: a parallel software tool for feature construction, based on Grammatical Evolution

Ioannis G. Tsoulos

Department of Informatics and Telecommunications, University of Ioannina, 47100 Arta, Greece

Abstract

This paper presents and analyzes a programming tool that implements a method for classification and function regression problems. This method builds new features from existing ones with the assistance of a hybrid algorithm that makes use of artificial neural networks and Grammatical Evolution. The implemented software exploits modern multi-core computing units for faster execution. The method has been applied to a variety of classification and function regression problems and an extensive comparison with other methods of computational intelligence is made.