

With the popularity of software defined radio and cognitive radio-based technologies in wireless communication, RF devices have to adapt to changing conditions and adjust its transmitting parameters such as transmitting power, operating frequency and modulation scheme. Thus, Automatic Modulation Classification (AMC) becomes an essential feature for such scenarios, where receiver has a little or no knowledge about the transmitter. This research explores the use of iterative techniques such as Genetic Programming (GP) for classification of digital modulated signals. K-nearest neighbor (KNN) has been used to evaluate fitness of GP individuals during the training phase. Additionally, in the testing phase, KNN has been used for deducing the classification performance of the best individual produced by GP. Several modulation schemes are used in this research for classification purpose. Higher order statistics have been used as input features for the GP. Simulation results demonstrate that the proposed method provides better classification performance as compared to other well-known state of art techniques