

ABSTRACT

Hyperspectral image dimensionality reduction is crucial for lowering computing complexity and accelerating processing. The high-dimensional feature vectors of hyper spectral data sometimes entail a high computing cost and the danger of over fitting when classification is carried out. As a result, dimensionality must be reduced using techniques like feature selection. Evolutionary computation (EC) algorithms have been presented as having a worldwide search capability and being inspired by various species (including fish, animals, fireflies, antlions, birds etc.) in nature for global optimization approaches. To choose effective band combinations, we transform the band selection problem into an optimisation problem in this study and adopt Genetic Algorithm (GA) and Whale Optimisation Algorithm (WOA) for band selection. The hyperspectral image classification process employs the chosen bands. The results show that the band optimized imagery perform in par with the imagery without optimization, without compromising the classification accuracy.