A Comparison of BPNN, RBF, and ENN in Number Plate Recognition

ABSTRACT

In this paper, we discuss a research project that related to autonomous recognition of Malaysia car plates using neural network approaches. This research aims to compare the proposed conventional Backpropagation Feed Forward Neural Network (BPNN), Radial Basis Function Network (RBF), and Ensemble Neural Network (ENN). There are numerous research articles discussed the performances of BPNN and RFB in various applications. Interestingly, there is lack of discussion and application of ENN approach as the idea of ENN is still very young. Furthermore, this paper also discusses a novel technique used to localize car plate automatically without labelling them or matching their positions with template. The proposed method could solve most of the localization challenges. The experimental results show the proposed technique could automatically localize most of the car plate. The testing results show that the proposed ENN performed better than the BPNN and RBF. Furthermore, the proposed RBF performed better than BPNN.