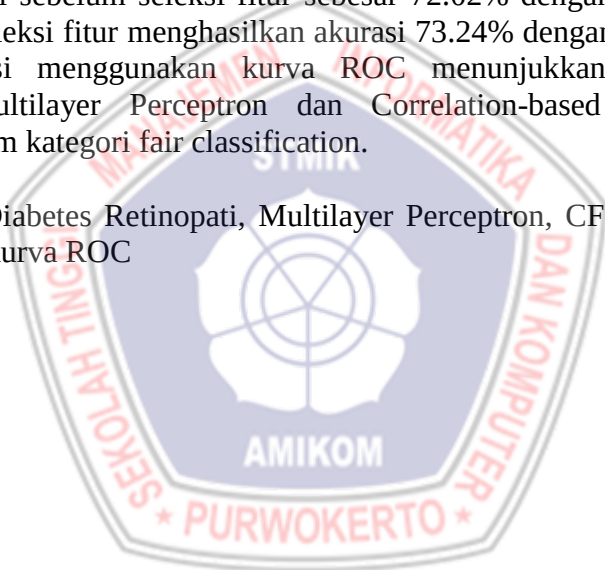


RINGKASAN

Diabetes retinopati merupakan salah satu komplikasi dari diabetes mellitus yang paling banyak menyebabkan kebutanan menetap. Semakin lama menderita penyakit diabetes mellitus maka kemungkinan menderita diabetes retinopati semakin besar. Diagnosa penyakit menggunakan cara konvensional dirasa kurang efektif sehingga memanfaatkan sistem berbasis komputer sebagai teknik analisa, salah satunya adalah ilmu data mining. Penelitian ini bertujuan mengetahui tingkat akurasi dan beban komputasi terhadap algoritma yang digunakan. Pada penelitian ini diagnosis dilakukan menggunakan kombinasi algoritme Multilayer Perceptron dan Correlation-based Feature Selection pada dataset messidor_features dengan tools weka. Hasil penelitian menunjukkan tingkat akurasi sebelum seleksi fitur sebesar 72.02% dengan waktu 2.46 second dan setelah seleksi fitur menghasilkan akurasi 73.24% dengan waktu 0.98 second. Hasil evaluasi menggunakan kurva ROC menunjukkan bahwa kombinasi algoritme Multilayer Perceptron dan Correlation-based Feature Selection termasuk dalam kategori fair classification.

Kata kunci: Diabetes Retinopati, Multilayer Perceptron, CFS, confusion matrix, kurva ROC



ABSTRACT

Retinopati diabetes is one of complications diabetes mellitus that most common cause of permanent blindness. The longer the disease diabetes mellitus the possibility of suffering from the retinopati diabetes will get bigger. Diagnose of disease using conventional way is considered less effective so that utilizes computer-based system as an analysis techniques, one of them is data mining science. In this research aims to know the level of accuracy and computational load against the algorithm being used. In this research the diagnosis is done using combination of Multilayer Perceptron (MLP) algorithms and Correlations-based Features Selection on the messidor-features dataset with weka tools. The result showed the accuracy before the feature selection is 72.02% with a time of 2.46 second and after feature selection the accuracy 73.24% with a time 0.98 second. The evaluation result using ROC curve shows that the combination of Multilayer Perceptron algorithms and Correlation-based Feature Selection are included in the category fair classification.

Keywords: *Retinopati Diabetes, Multilayer Perceptron, CFS, confusion matrix, ROC curve*