

Implementasi Machine Learning pada Aspek Manusia dalam Kesadaran Keamanan Informasi = Implementation of Machine Learning for Human Aspect in Information Security Awareness.

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Abstrak

Penelitian ini membahas tentang membangun model machine learning pada aspek manusia dalam kesadaran keamanan informasi. Model dibangun melalui pendekatan classification dan clustering melalui proses secara garis besar meliputi: impor data, menangani data tidak lengkap, penyusunan dataset, feature scaling, membangun model serta mengevaluasi model. Dataset disusun berdasarkan hasil kuisioner yang merujuk The Human Aspects of Information Security Questionnaire pada masyarakat di Indonesia. Hasil model classification dievaluasi dengan beberapa metode yaitu analisa k-fold Cross Validation, Confusion Matrix, Receiver Operating Characteristic, serta perhitungan skor pada masing-masing model. Salah satu algoritma pada classification yang digunakan yaitu Support Vector Machine memiliki kinerja dengan akurasi 99,7% dan error rate sebesar 0,3%. Algoritma pada clustering salah satunya yaitu DBSCAN memiliki nilai adjusted rand index selalu mendekati nilai 0.

.....This research discusses building a machine learning model on the human aspect of information security awareness. The model built through a classification and clustering approach through a broad outline process, including importing data, handling incomplete data, compiling datasets, feature scaling, building models, and evaluating models. Dataset arranged based on the results of a questionnaire that referred to The Human Aspects of Information Security Questionnaire to Indonesia society. The results of the classification model evaluated by several methods, namely k-fold Cross Validation analysis, Confusion Matrix, Receiver Operating Characteristics, and score calculation for each model. One of the algorithms for classification, the Support Vector Machine, has a performance with an accuracy of 99.7% and an error rate of 0.3%. One of the algorithms in clustering is that DBSCAN has an adjusted rand index value consistently close to 0.