Implementasi model fraud detection pada transaki kartu kredit studi kasus PT Nusa Satu Inti Artha = Fraud detection model implementation on credit card transaction case study PT Nusa Satu Inti Artha

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Abstrak

Transaksi kartu kredit yang semakin meningkat yang diikuti dengan maraknya tindak kecurangan memicu penelitian mengenai pengembangan model prediksi transaksi kartu kredit fraud. Data transaksi kartu kredit Doku digunakan menjadi sumber data pada penelitian. Penelitian ini melakukan pengembangan model prediksi serta webservice prediksi transaksi kartu kredit fraud. Fitur yang digunakan dalam pembuatan model adalah amount, payment bank issuer, payment bank acquirer, payment brand, payment 3D secure ECI, payment type, payment bank issuer country, dan hour. Model Decision Tree memberikan hasil terbaik dalam aspek precision dan F1-score dengan nilai 97.2% dan 96.8%. Model XGBoost memberikan hasil terbaik dalam aspek recall dan FP-rate dengan nilai 96.4% dan 3%. Kedua model tersebut sama-sama memperoleh nilai accuracy terbaik yaitu 96.7%. Dalam aspek webservice, model XGBoost memiliki performa terbaik dengan rata-rata throughput 77 request per detik. <hr /> The increasing amount of credit card transaction followed by fraudulent transaction becoming more rampant provokes many studies in fraud credit card transaction prediction model. Doku credit card transaction is used as data source for this study. This study experiments on developing model and webservice to predict fraud credit card transaction. Features used in builiding the model are amount, payment bank issuer, payment bankacquirer, payment brand, payment 3D secure ECI, payment type, payment bank issuer country, and hour. Decision Tree model achieves best precision and F1-score with 97.2% and 96.8% score. XGBoost model achieves best recall and FP-rate with 96.4% and 3% score. Both said model achieves same best accuracy with 96.7% score. In regards of the webservice, XGBoost achieves best performance with average throughput reaching 77 request per second.