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Bankruptcy Prediction System

Mohamad Aizuddin Bin Mohamad Rafee
Khairul Nizam Bin Abd Halim
Mohd Shamil Bin Mohd Shukri
Muhamad Nur Firdaus Bin Samsudin

Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA Melaka

muhdnurfirdaus.samsudin@gmail.com

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***Abstract*—A company often takes bankruptcy prevention measures. This action is critical to ensure the viability of their business. Preventive activity refers to the activity of predicting and analysing the probability of bankruptcy. This process is challenging because it requires expert, specialized techniques, takes a long time, and high cost. Here is introduced a novel product called Bankruptcy Prediction System (BPS). It is built using Artificial Intelligence technology with Random Forest techniques. It is more practical than the existing way to predict and measure the probability of bankruptcy for a company quickly, without using experts, and producing reports automatically without engaging in tedious and complicated statistical calculation work. BPS has been registered under MyIPO under the copyright domain. BPS has a high commercial value to be marketed to all companies that want to prevent bankruptcy and all finance companies that want to predict a company's ability to repay its loans. BPS has been tested using a set of data collected from the Emerging Markets Information Service (EMIS), a database containing information on emerging markets worldwide to build a classification model. According to the tests' findings, BPS ensures the accuracy of the bankruptcy predictions up to 90% and beyond. BPS is flexible and able to customizable with different data and users. BPS is beyond the prototype as it provides a better technique to predict the company's status toward bankruptcy and ready to penetrate the market.**

***Keywords*—Prediction, Bankruptcy, Random Forest, Artificial Intelligence, Classification**