

## **ABSTRACT**

*Research focuses on Free Cash Flow (FCF) prediction for companies listed on the Indonesia Stock Exchange (IDX) using the XGBoost (eXtreme Gradient Boosting) method. FCF is a company's net cash flow obtained from the difference between Operating Cash Flow (OCF) and Capital Expenditure (CapEx). FCF also provides a company's income scheme and indicator of the company's financial health. Because of this, FCF predictions are needed by investors, financial analysts, and company management to make better decisions.*

*Free Cash Flow prediction uses the XGBoost method. This research also optimizes XGBoost using Exhaustive Search, showing and evaluating the XGBoost model performance with R-squared metrics and Mean Absolute Error (MAE). Free Cash Flow and Earnings are predictor variables in this research. The study results show that an XGBoost can handle well for Free Cash Flow prediction. The study also shows that an Exhaustive Search can optimize XGBoost. From Exhaustive Search, the highest accuracy of the XGBoost model was found with R-Squared 0.84499 or 84.49% and Mean Absolute Error 0.00791. Through the Feature Importance, the XGBoost model reads Free Cash Flow can be predicted well using the latest trend and historical FCF for last year.*

**Keywords:** *Free Cash Flow, XGBoost, Feature Importance, Earnings, Exhaustive Search, Indonesia Stock Exchange.*