

## Stock Price Prediction with 'Earnings' Conference Call Sentiment

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**Abstract :** Major public corporations worldwide use conference calls to report their quarterly earnings. These 'earnings' conference calls allow for questions from stock analysts. We investigated if it is possible to identify sentiment from the call script and use it to predict stock price movement. We analyzed call scripts from six companies, two each from Korea, China and Indonesia during six years 2011Q1 - 2017Q2. Random forest with Frequency-based sentiment scores using Loughran MacDonald Dictionary did better than control model with only financial indicators. When the stock prices went up 20 days from earnings release, our model predicted correctly 77% of time. When the model predicted 'up,' actual stock prices went up 65% of time. This preliminary result encourages us to investigate advanced sentiment scoring methodologies such as topic modeling, auto-encoder, and word2vec variants.

**Keywords :** earnings call script, random forest, sentiment analysis, stock price prediction

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