

DeePre: Deep Learning for Delisting Predictions using Financial Statement Analysis

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Abstract—For the last hundred years, financial statements have been ubiquitously used by corporations throughout the world. Both the government and investors observe these statements, for vastly differing purposes. The numeric data in these statements provided by these corporations can be easily manipulated to mislead consumers or even the companies themselves. Current systems for inspecting the legitimacy of financial statements are based on restrictive methods that use numeric analysis and simple rule-based AI. These countermeasures have major problems; malicious actors may easily bypass the inspectors’ countermeasures by creating seemingly or borderline legitimate data that may be overlooked. Furthermore, the malicious actors may have broad experience in generating seemingly legitimate, causing for further confusion.

Many companies that have been delisted from the stock market have experienced the same patterns in their financial statements; it is often or overwhelmingly the case that these patterns are predictable as far as one quarter or even one year before delisting. Therefore, while most legitimacy inspection tools are targeted at numbers, we are focused on terminology used in the statements. Google’s Bidirectional Encoder Representations from Transformers (BERT) can be used in finance for finding important words in sentiment analysis.

Index Terms—data mining, financial statement, delist prediction, BERT

I. INTRODUCTION

This document is a model and instructions for L^AT_EX. Please observe the conference page limits.

NATURAL LANGUAGE PROCESSING APPLICATIONS

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