

Researchers from the University of Southern California have found that artificial intelligence (AI) can serve as a powerful tool for analyzing corporate reports, uncovering hidden patterns within large volumes of data.

The scientists applied AI to study financial documents of S&P 500 companies over the past 20 years, and the results are impressive: the technology revealed connections between the language used in reports and real business performance indicators that had previously gone unnoticed.

AI analyzed texts using natural language processing methods—where machines “read” and interpret human language, identifying key themes and sentiments. For instance, it found that companies using a more optimistic tone in their reports were more likely to show profit growth in the following quarter. Researchers note that such insights could help investors and regulators better understand what’s happening inside corporations.

According to Professor Daniel O’Leary, who led the project, AI doesn’t replace analysts but complements them by speeding up data processing and highlighting unexpected trends. While the technology is currently being tested on historical data, it may be adapted for real-time predictions in the future.