**Using Artificial Intelligence on Sell-Side Brokerage Reports**

**Introduction**

Recent advances in computational power and cost have led to large leaps in the science of large language models (LLMs) like ChatGPT. Due to their vast scale and parameter size, these models exhibit emergent abilities, enabling human-level reasoning across diverse tasks. These make LLMs powerful tools in frontline research and applications including within the investment management industry. Effective language understanding and generation can inform trading, risk modeling, as well as financial statement analysis.

Text mining is an area where deep learning models and natural language processing techniques are extensively utilized.  Financial text mining aims to extract valuable information from large-scale unstructured data in real-time, enabling more informed decision-making in trading and risk modeling. See, for example, “Large Language Models in Finance: A Survey,” Li et al., 2023[[1]](#footnote-1).

Along with LLMs, the science of text mining or financial sentiment analysis (FSA) has also advanced with considerable speed. Larger players like Factset and even Ravenpack have struggled to keep up with the pace of progress and provide bespoke solutions to problems that portfolio managers face.

**The Problem**

One challenge that both portfolio managers and analysts face is the reams of data from sell-side analyst reports. These reports while tremendously informative, are also dense and time-consuming to read. We propose a bespoke product for American Century that will use a combination of text mining, sentiment analysis, and LLMs, to summarize and encapsulate the key points of these reports.

**The Solution**

Using a proprietary

1. “Large Language Models in Finance: A Survey,” *Proceedings from the 4th ACM International Conference on AI in Finance, Brooklyn, NY, USA, November 2023* [↑](#footnote-ref-1)