Misleading financial content detection with Generative AI and it’s implication on Equity Research and Climate change

Equity research is essentially research on a stock to determine whether to buy, sell, or hold it.

In the stock market, at a given moment in time "t," almost 90% of the approximately 6000 listed companies' financials can be misleading. That's why people mostly invest in the top 600 companies because they are larger in size and analyzing them is more beneficial.

If mutual fund and other asset under management companies want returns and don't want to lose their money or pay taxes, they hire teams of equity research analysts in large quantities. This ensures they keep investing and don't lose their existing assets and net worth.

Examples of equity research firms include Motilal Oswal, Angel One, etc. Outside India, there are firms like JP Morgan, Morgan Stanley, etc.

Majorly, there are three types of content in equity research:

(i) Tables: Accounts and Balance Sheets
(ii) Conversations between analysts and board members
(iii) Financial statements, news, and articles.

A significant portion of research overlaps across these types. If we continuously use Generative AI to detect financially misleading content, the need for many analysts would diminish over time. The accuracy would also increase exponentially. This would enable us to compete with major equity research firms, asset under management (AUM) companies, and investment banks on the analysis front. Their main unique selling proposition (USP) lies in their analysts, who prevent them from incurring losses.

However, there is a problem.

Creating a Minimum Viable Product (MVP) that is useful is not possible because it requires a substantial amount of data upfront. If we were to analyze only 4-5 companies, their reports are already available in the market, and until we have data for all 6000 companies, we won't develop a USP. Just like any scalable AI startup like ChatGPT, the initial effort is quite high.

Obtaining a SEBI license is also necessary, as it is recommended for earning brokerage.

If this implementation were to happen, it would significantly impact stock manipulation. This is the reason behind large-scale corruption, political funding, and crony capitalism.

Financially misleading information not being detected quickly is one of the reasons why we cannot invest in the right companies for the right causes at the right time, leading to all the funds ending up with a few particular big companies.

This issue plays a significant role in areas like climate change.

When people are unable to invest in the right companies at the right time, it makes inequality worse. Inequality is a natural state, often stemming from the fact that different raw materials are found in particular geolocations. However, when this inequality increases due to funds being directed towards few big companies, it leads to even greater inequality.

As a result, we have to build skyscrapers to protect assets. To sustain those assets, we need to blindly manufacture many non-essential items. This is why the carbon emissions in urban areas due to consumption are much higher than those from other sources.

Anyone living far from nature and in the middle of concrete jungles, meaning big buildings (more than 10 floors), cannot sustain for long without too much luxury, and then, as a result, we have to psychologically make entire society luxury-seeking via misleading marketing, which leads to massive consumption.

Mainly greenhouse gases responsible for climate change include carbon dioxide and methane.

(i) Carbon dioxide (CO2), which accounts for 76% of emissions, mainly occurs due to electricity/heat production, manufacturing of products, and their transportation. As consumption demand increases, CO2 emissions will also rise, not only to produce those consumables but also for their transportation.

(ii) Methane (CH4), which accounts for 16% of emissions, mainly occurs due to animal husbandry and meat consumption. 50% is directly contributed by the process of fermentation in the stomachs of ruminant animals such as cattle, sheep, and goats, which are almost 80% of the animals consumed by humans for meat. We are producing them artificially to fulfill the ever-increasing need for meat and dairy products, and then we need to slaughter and transport them, which are also responsible for CO2 production.

With the same Generative AI, we can detect other misleading content as well, which helps us to develop robust tax policies related to "carbon emissions" and redirect funds towards "sustainability".