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Hyer Society Application Essay

<center>The Beginning of the End</center>

Recently, technology has been a topic at the forefront of many nationwide discussions, especially in the field of financial services. An investment bank performs as a middleman between those businesses with excess capital and those in need of capital. Typical roles include building financial models based on vast stores of data and then using those models to negotiate with the opposing side to obtain the best deal for your client. Traditionally, the grunt work of creating models falls under the purview of first and second year analysts. With the rising trend towards automation, artificial intelligence, and machine learning, however, this work could be on its way down a non-traditional path. Large banks such as JPMorgan and Bank of America spent up to $9.5 billion on technology investments in 2016 alone (Sennaar). Assuming that artificial intelligence has the capability of analyzing data and creating financial models, the same employees that simplified and developed a learnable, step-by-step process to assist in their day to day work could see their jobs marked for elimination because of it.

In the early stages of artificial learning's foray into investment banking, technology will first replace the most menial analyst tasks available, such as "mundane data gathering and filling out worksheets" ("Artificial Intelligence is Taking Over"). JPMorgan, for example, recently introduced intelligent technology that analyzes 12,000 credit agreements in a matter of seconds. That work would ordinarily take approximately 360,000 manual hours (Sennaar). While JPMorgan is a frontrunner in the implementation of artificial intelligence within its investment banking division, the company is not alone in its sentiment regarding potential expansion. According to Marty Chavez, CFO of Goldman Sachs, the investment banking division "has

mapped out 146 distinct steps in the initial public offering process," many of which are "begging to be automated" (Byrnes). This automation means that employees will be spending more time completing mentally demanding, decision-based tasks. Employees who can no longer break up their day with menial, yet productive tasks may feel increased levels of stress. In turn, workplace satisfaction could decrease, and occupational burnout could heighten.

Eventually, with technology reducing the cost, number of employees, and amount of time spent creating models, it will become increasingly feasible for client companies to develop in-house alternatives or outsource to a technology company rather than to an investment bank. Improvements in artificial intelligence therefore run the risk of making independent investment banks obsolete.

This rapid expansion of non-traditional methods causes additional concerns regarding degree of culpability. International standard setters have expressed growing fear that "the emergence of new systemically important players [could] fall outside the regulatory perimeter" ("Artificial Intelligence and Machine Learning"). Today, errors can be attributed to specific actions and individuals can be held responsible for those actions by acts of law. The question then raised is who to blame when an artificial intelligence program is erroneous, and millions of dollars are lost based on an inaccurate prediction or technological miscalculation?

Critical thinking will be the most crucial teachable skill moving forward in an artificial-intelligence dominated industry. The Financial Stability Board believes that "the lack of interpretability or auditability of AI and machine learning methods could become a macro-level risk" ("Artificial Intelligence and Machine Learning"). To manage this risk, companies will be looking for employees that can interpret technological outputs critically. Rather than just trusting the computer, the employee must be able to authenticate its results and identify how the answer

was derived. Machine learning is excellent at learning from the past, but in finance the past is often misleading, patterns change, and the forward-looking projections made by finance professionals should reflect a critical view of the future.

Compulsory rudimentary coding classes are also imperative to future success. Even as many jobs are eliminated, coding jobs are continuing to grow. "Across Goldman Sachs, over 30% of their staff are now computer engineers" ("Artificial Intelligence is Taking Over"). Coding is no longer a separate, small department of geeks, but rather it is an integral part of the day to day work throughout all departments.

Advancements that initially seem to simplify the work of investment bankers could actually spell out the death of the industry. Rapid investment in the field will quickly make menial tasks obsolete and reduce the cost of developing independent programs. As a result, the ability to think critically and adapt to the changing job landscape will distinguish the successful world changers that SMU aims to develop from the rest of the pack. Students must prepare for the jobs of the future, rather than the jobs of today.

Works Cited

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