

Department of Computing

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Executive Summary

This comprehensive exploration into Data Mining for Trading outlines a strategic approach by a collaborative group aiming to capitalize on data-driven insights for informed decision-making in financial markets. The assignment is divided into three integral components: data collection, data analysis, and presentation. Each phase is meticulously planned to leverage Python and Tableau, with a keen awareness of industry competitors providing financial data.

In the initial phase of data collection, the team, led by [Your Name], proposes the development of a Python-based web scraper. This tool will systematically retrieve financial data, ensuring real-time and historical accuracy. The customization capabilities of the web scraper are set to overcome data limitations, providing a tailored dataset that aligns with specific trading indicators and parameters. This strategic approach aims to elevate the quality and relevance of the collected data.

Moving on to data analysis, the group recognizes the imperative role of robust analytical tools. Leveraging Python's extensive libraries, the team plans to conduct thorough statistical analyses, pattern recognition, and predictive modeling. The objective is to unearth valuable patterns and trends, empowering the trading strategy with data-driven insights that enhance portfolio performance and decision-making.

In the subsequent phase, the focus turns to presentation, where the team intends to utilize Python for dynamic data visualization and Tableau for comprehensive presentation. This combination promises to deliver compelling visualizations, making complex trading patterns and trends accessible to both technical and non-technical stakeholders. The strategic integration of Python and Tableau aims to enhance the communication of findings and foster a deeper understanding of the data-driven insights generated in the analysis phase.

Lastly, the group acknowledges the competitive landscape in the provision of financial data. Notable companies such as Investing and FX are recognized as industry competitors. Understanding the strengths and weaknesses of these entities is crucial for benchmarking and ensuring the efficacy of the proposed data mining strategy. By considering the offerings of these competitors, the group aims to refine their approach, ensuring it remains at the forefront of the evolving landscape of financial data analytics.

In conclusion, this comprehensive strategy, encompassing data collection, analysis, and presentation, positions the group to harness the power of data mining for trading. The integration of Python and Tableau ensures a seamless workflow, while a thoughtful consideration of industry competitors adds a strategic dimension to the initiative. This approach, spearheaded by [Your Name], aims to empower the trading team with actionable insights, fostering a competitive edge in the dynamic and data-intensive realm of financial markets.

References

* Akter, A., & Wamba, FS. (2016).” Big data analytics in E-commerce: a systematic review and agenda for future research”. Available at: <https://link.springer.com/article/10.1007/s12525-016-0219-0> (Accessed 27 Oct 2023).
* AJEE Journal. (2023). Business Ethics in E-Commerce – Legal Challenges and Opportunities. <https://ajee-journal.com/business-ethics-in-e-commerce-legal-challenges-and-opportunities>. (Accessed 26 Oct 2023).
* Chen, H., Chiang, R. H., & Storey, V. C. (2012). Business intelligence and analytics: From big data to big impact. MIS Quarterly, 36(4), 1165-1188.
* Chron. (2019). The Ethical Problems In E-Business. <https://smallbusiness.chron.com/ethical-problems-ebusiness-62037.html> (Accessed 28 Oct 2023).