

## **Problem Statement:**

In the context of contemporary financial markets, where investment decisions are intricately linked to the rapidly evolving realm of artificial intelligence, there exists a critical need for innovative solutions that harness the power of machine learning and advanced data analysis. Prediction plays a very important role in stock market business which is a very complicated and challenging process. Employing traditional methods like fundamental and technical analysis may not ensure the reliability of the prediction. This report addresses the design and development of an AI-driven virtual assistant named S.I.R.I.U.S. (Stock Intelligent Real-time Investment Understanding System), poised to revolutionize the landscape of investment strategies. The objective of this research is to create a comprehensive, intelligent, and adaptable system capable of tackling multifaceted real-world investment challenges.

## **Abstract**

In the rapidly evolving landscape of finance, the fusion of investment decisions and artificial intelligence requires innovative solutions. Traditional stock prediction methods often fall short due to market complexities. This report introduces S.I.R.I.U.S. (Stock Intelligent Real-time Investment Understanding System), an AI-driven virtual assistant designed to revolutionize investment strategies. Our objective is to create a versatile system that addresses multiple real-world investment challenges.

S.I.R.I.U.S. employs advanced machine learning algorithms and real-time data to construct predictive models, surpassing traditional analysis. The system's unique pattern recognition capabilities empower it to navigate intricate market trends. It goes beyond prediction, offering risk assessment and decision support, forming a comprehensive toolkit for diverse investor needs.

Our research bridges the gap between cutting-edge AI and investment practices. S.I.R.I.U.S. aims to transform conventional approaches into sophisticated, data-driven decisions, empowering investors to make informed choices in a volatile market. The innovative contributions of this research lie in the inception of S.I.R.I.U.S. as an intelligent stock market companion that transcends predictive functions. The virtual assistant's multifaceted attributes encompass pattern comprehension, risk evaluation, and decision facilitation, constituting a comprehensive toolkit catering to the diverse needs of investors.

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