

ATS – Algorithmic Trading System (Gold)

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Abstract: *In this paper, we use trading system to gold currency for using Algorithmic Trading System. Algorithms are used in algorithmic trading to carry out trades by following a predetermined set of rules and a trend. The business can create money at an unhumanely high pace of repetition. The described sets of trading rules that are transmitted to the programmes are dependent on time, significance, magnitude, or any other mathematical paradigm. Algo-trading offers the trader more than just lucrative opportunities. By eliminating the impact of human emotions on trading, increases market liquidity and improves trade accuracy. Our project seeks to advance this change in the marketplaces of the future by offering a practical and effective way to get beyond the problems associated with manual by creating an automated trading bot that uses both its own algorithms and user methods for day-to-day trading.*

Keywords: Algorithmic Trading, Moving average, Gold, Finance, Data Collection, Data Analysis and Predication

I. INTRODUCTION

ATS system is a platform for analyzing, predicting, trade online. This can be really helpful for maintaining the human emotions and psychological. Algorithmic trading is a technique for executing orders utilizing mechanized pre-modified trading guidelines representing factors like time, cost, and volume. This kind of trading attempts to use the speed and computational assets of PCs comparative with self monitored trades. Just one of every five-day investor is productive. Algorithmic trading improves these chances through better technique configuration, testing, and execution.

We are using Forex market, gold is a form of currency. The particularity of gold is that it can only be traded against United States dollars (USD). The internationally accepted code for gold is XAU.

Few Advantages of Algorithmic Trading

1. Quick, Fast and Reduced Cost Trading
2. Enhanced Precision and Diversity in Trading
3. Backtesting enabling traders to assess and tweak a trading idea.

The global algorithmic trading market is expected to grow significantly between 2018 and 2026. Our project aims to further this revolution in the markets of tomorrow by providing an effective and efficient solution to overcome the drawbacks faced due to manual trading like: Trades are executed at the best possible prices.

II. PROBLEM STATEMENT

The goal is to develop an algorithmic trading bot that uses Random Forest to complement successful trading methods like Range Trading/SMA, Gold Cross, Multi Data Strategy, etc. for day-to-day (Intraday) trading. The bot will invest and trade continuously throughout the day while making adjustments to ensure the best trade turnover for the day and lower transaction costs, enabling significant profits for the concerned users, whether they are businesses or individuals.

III. RESEARCH GAP

- The existing system have work on stock prediction on the basis of “ Historical Data”.
- They do this by using of machine learning Algorithm.

The existing system does not provided:

- An effective and efficient solution for client.
- The automated trading system with low risk.
- High accuracy automated trading system.



IV. MODULE DESCRIPTION

This is our interface of mt4 software . In which there are option for user ‘ Algo Trading ’ button if user click on the algo trading button trading will get start automatically with the help of our own strategy which we have implemented in this software.



Figure 4.1: Login Process

This is a application for creating indicators. You can turn your manual trading into arrows and alerts and create indicators for MT4 . You can also turn any manual system into a fully-working Robot.

V. DFD OF PROPOSED SYSTEM

- The Architectural diagram of our proposed solution. We have two types of roles i.e. Trader and Bot.
- The Trader has access to trade orders, viewing market statistics, setting up a day trade strategy via the bot and manage their account.
- The Bot will be validating and placing trades as per market and user statistics, will be sending notifications, and have access to user wallet to execute trade order.

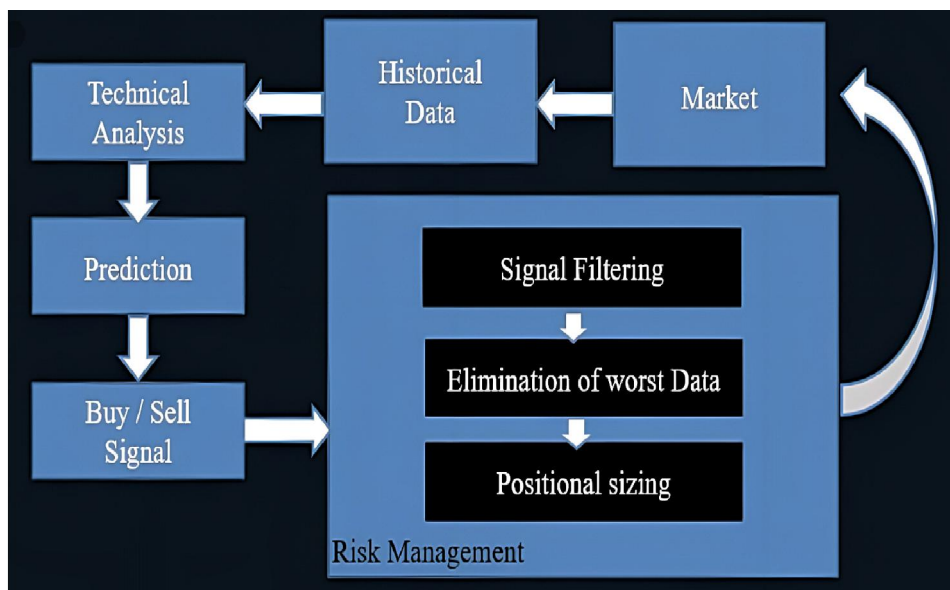


Figure 5.1: Data Flow Diagram For Proposed System

VI. FUTURE SCOPE

Using Advanced computers, ultrahigh-frequency trading involves buying and selling equities at exceedingly rapid rates. These computers use algorithms to monitor hundreds of public and private marketplaces at once, process 5-6 of orders per day, and change tactics in hours. In the US, there are currently 20,000 businesses, and just 2% of them are ultrahigh-frequency trading firms, yet they account for 73% of total equities trading activity. A trader or algorithmic trading system in ultrahigh-frequency trading estimates its holding duration in seconds, sometimes even in days of hours.

VII. RESULT

To enhance the trading experience of the user a software or algorithm are automatic trade in mt4 software is designed. It applies a particular strategy. so the user can trade automatically. There are many software available in a market but this can make the trading experience effective and efficient solution for client.

VII. CONCLUSION

- Algorithmic Trading System not only provides Security, Cost, and Speed but is also a revolutionary technology for the future financial markets and economy.
- Algorithmic Trading System makes it easier for both new traders as well as established ones in getting profitable outcomes with minimized effort, time and loss.
- The integration of Financial Knowledge with Machine Learning is a demand of future Trading and enhances both Performance and Revenue.

REFERENCES

- [1]. S. Bouktif A. Fiaz and M. Awad "Augmented Textual Features-Based Stock Market Prediction" IEEE Access vol. 8 pp. 40269-40282 2020.
- [2]. H. Ao and E. Tsang "Trading algorithms built with directional changes" Proc. IEEE Conf. Comput. Intell. for Financial Eng. Econ. (CIFEr) pp. 1-7 May 2019.
- [3]. H. P. Kumar and B. S. Patil "Forecasting volatility trend of INR USD currency pair with deep learning LSTM techniques" 2018 3rd International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS) pp. 91-97 2018.
- [4]. F. Bertoluzzo and M. Corazza Reinforcement learning for automatic financial trading: Introduction and some applications Venice Italy 2012.
- [5]. J. Bialkowski, S. Darolles and G. F. Le, "Improving VWAP strategies: a dynamic volume approach," Journal of Banking & Finance, Vol. 32, pp. 1709-1722, September 2008.
- [6]. J. Fraenkle, S. Rachev, and C. Scherrer, "Market impact measurement of a VWAP trading algorithm," Journal of Risk Management in Financial Institutions, Vol. 4, pp. 14-16, June 2011
- [7]. M. Orchel, "Support vector regression with a priori knowledge used in order execution strategies based on vwap," Advanced Data Mining and Application, Vol. 7121, pp. 318-331, 2011.