Investment Management System

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ABSTRACT

Decision Decision-making systems that use actors That Can Be Done in the context of financial services include a variety of applications ranging from investment advice to financial trading. Order flow analysis presents many unresolved challenges with machine learning (ML) strategies to determine the right flexible trading strategy. The first step in this direction is represented by an analysis of the effect of systematic flow: the model must see strong predictions that determine the positive/negative outcome. The purpose of this work is to suggest an ML closed-loop method based on the tree decision (DT) model to be implemented.effect analysis of financial trading data. The whole process is included in the decision Outcome Analysis Support Program. Considering the complexity of the model, the DT algorithm enables the production of definitions that allow the user to understand (i) how this result is achieved (decision rules) and (ii) the most discriminating outcome predictions (feature value). The loop closure method allows users to interact directly with the proposed DSS-OA by retraining the algorithm for the purpose of fine-grained analysis. Test results and comparisons have demonstrated the high interpretation and performance of the proposed DSS-OA by providing a valid and fast system for analyzing results on financial trading data. In addition, conceptual evidence studies have shown the impact of the proposed DSS-OA on the outcome analysis situation.

keywords- Convolutional Neural Network(CNN), Machine learning, Decision tree, Investment.

I. INTRODUCTION

By analyzing patterns from Share Holdings of large, well-known institutional and individual investors we can figure out the time series data pattern and trend of the market, and apply similar strategies for investing, sounds effortless.

Nowadays even investing in nifty kind of slows down your growth as there are numerous much better options available for investing which provides better returns on equity with retaining higher liquidity.

So my point after all is having good financial knowledge is the necessity of time if you want to save your money from inflation and gain optimum returns from them. But who has time for all this as this extremely huge market, So we have an idea that will also save our efforts and time and will give much higher returns on our investment?

The best way to learn anything is to learn from the master who has possessed the skills by spending time and gaining experience in that particular field.

II. PROBLEM STATEMENT AND MOTIVATION

Creating a good portfolio is the necessity of time, Investing and managing your

money is a huge market, for a person who lacks financial knowledge or doesn't have time will not be able to gain the advantage of this market.

Now let us study % returns on the following financial instruments using this simple case:

1]. % Returns on F.D. – between 5.0 to 6.0 (for senior citizens)

2]. % Returns on Nifty – 11.30 C.A.G.R. approx.

3]. Inflation rate in India – 5.3% as of 2020

Between the two (F.D. & Nifty), a person lacking financial knowledge may be missing returns gained from nifty (11.30%) and still may be hinged upon F.D. and expecting a good return which is not true as even the inflation rate is higher than returns on F.D., well the safety and guarantee of investment can be a topic of discussion.

III. ALGORITHM

RNNs are a powerful and flexible type of neural network and are part of the most promising algorithms in use because they are the only ones with internal memory.

Like other deep learning algorithms, neural networks are very old. They were first created in the 1980s, but in recent years we have seen their true power. The rise of computing power and the huge amount of data we have to deal with now, as well as the introduction of temporary memory (LSM) in the 1990s, has brought RNNs forward.

Because of their internal memory, RNNs can remember important details about the inputs they receive, allowing them to be more accurate in predicting what's to come next. This is why it is the preferred algorithm for sequential data like timeline, speech, text, financial data, audio, video, weather, and much more. General neural networks can form a much deeper understanding of sequence in their context compared to other algorithms.

General neural networks (RNN) are a class of sensory networks that are useful for modeling sequential data. Based on feedforward networks, RNNs display similar behaviors in the way the human brain works. Simply put: common neural networks produce predictable results in consecutive data that can be generated by other algorithms.

"Whenever there is a sequence of data and that the temporary power of data connection is more important than the local content of each framework."

- Lex Fridman (MIT)

As RNNs are used in the software behind Siri and Google Translate, conventional neural networks reflect more on everyday life.

CNN

A convolutional neural network, or CNN, is a deep neural learning network designed to process structured data such as exposure.

CNN is very pleased to find the design in the embedded image, such as lines, gradients, circles, and even the eyes and faces.

This is a factor that makes the convolutional neural network more powerful in computer vision. CNN can work directly on the wrong image and does not require pre-processing.The convolutional neural network is a neural server, usually less than 20.The power of the convolutional neural network comes from a type of layer called the convolutional layer.CNN consists of several layers attached to one

another, each with the ability to detect the most complex shapes..

IV. LITERATURE REVIEW

MacLean, L. C. & Ziemba, W. T. (1999) 'Growing Against Trade Security in a Strong Financial Analysis', in R. J-B. Wets and W. T. Ziemba (eds) Stochastic Programming: State of the Art 1998, Balzer Science Publishers, Amsterdam, 193

Shanthi and Murugeasan (2016) concluded that there is no relationship between education and investment while there is a significant relationship between age and income. On the other hand N.S.Shukla (2016) found that there is no relationship between education and investment while there is a significant relationship between age and income.

Priya Vasagadekar (2014) of working women concludes that because of education, modern women now get better jobs with higher incomes. It has become a modern need for working women in India to grow their wealth. Since many women are not able to learn financially well, it is not easy for them to manage their investment activities on their own. And the level of risk of working women in India is low. This is due to a lack of sound financial information.

Rajeshwari Jain (2014) finds that working women prefer to invest in a stable bank deposit in a safe and tax-free manner which also shows that women re-choose gold as a good alternative to investing instead of a bank deposit. A study of the views of female investors on investment by Kanagaraj et al. (2014) concludes job level and education have little to do with raising awareness among female investors in the city of Coimbatore.

Deerajen Ramasawmy (2010). In his research paper he has researched the Level of Financial Awareness. has identified four key aspects of financial literacy, namely quality and value, definitions and theories, barriers and measures to improve financial literacy. The paper also aims to show the relationship between financial information and emographics such as age group, gender and planned study. Research has found that most students have a limited level of knowledge and skills in financial and savings and credit.

V. RESEARCH METHODOLOGY

This study is a volume design and uses secondary data. A total of 45 people and real estate companies are listed on the Stock Exchange and all residents are samples of this study. The type of data used in this study is secondary data and the feature is the opposite clause, in view of the financial statements dated 31 December 2017, annual report, company profiles, and published data such as advertising companies, real estate surveys and sustainability. the concept developed by sampling companies and by interviewing architects and technicians has also been developed to obtain comprehensive results.

In this report, the refund we used is a total margin refund using the following method: sales revenue minus the cost of goods sold and divided by the total retail sales revenue. Especially in real estate investment listings, we make estimates of total assets (inventory divided by total assets and investments are also divided by total assets).

Data Analysis
Descriptive Statistics

The total margin return is calculated on the entire property type and asset management only in the entity showing the item separately in the notes to the financial statements. Researchers calculate the rate of such returns in order to obtain the expected return. The normal deviation from the reversal is a risk to the type of structure. The standard is made up of the expected return to obtain an explanation for the restoration of all types of property and administrative assets.

An analysis of the relationship is made between the expected return and risk, inventory and asset return, property list and income, investment properties and asset returns, and investment properties and revenue.

Logistic Regression

The downside is to know the impact of the company's portfolio size and sense of stability.

There are two logistic models, namely:

The First Model

The first model is to evaluate the size of the company that will influence the portfolio to overstay. Stock Exchange real estate companies are types of investments in real estate management (such as property development, apartments, residences, shopping malls, dry harbor, shopping malls, apartments, office towers, building, and portfolio management, residential facilities., Hospitality services and infrastructure.). The average portfolio is 6 or more. In this study, we were made to reconsider. Y is 1 if the company makes a portfolio above average while Y is 0 if the company does not.

The Second Model

The second model is a test, the stability will be influenced by the size of the company. We offer 1 if the company creates a sense of stability and zero for others who do not. The size of the company is measured by the natural logarithm in total assets.

Buildings and Buildings

Property is the interests, benefits, and rights that come with real estate ownership (Appraisal Institute, 2008). Based on the Appraisal Institute (2008), the location for sale is the identification of parcels or parcels of land including repair (if any).

They are parts or objects established or inferior or in the form of a permanent structure, such as space, buildings, and structures in a residential area.

The characteristics of the properties for sale include differences in information, local markets, different properties, illiquidity, tax management, and supply limits (Chinloy, 1987 in Akkaya, 2005). The difference in knowledge means that there is unequal knowledge between the buyer and the seller in real estate transactions. Local market means that markets are local in the range of physical properties. Different buildings refer to a variety of features between buildings. Illiquidity means that the property being sold is not mobile or profitable and requires a certain legal entity as well as large size divisions. Tax management, especially tax benefits can be an important factor in an investment decision. Provision limits mean that land supply is very limited.

Return Risk

Investment decisions involve trading between returns and risks. Investors should be willing to buy certain assets if the expected return is sufficient to compensate for the risk (Jones et al., 2009). The Chinese symbol of danger, the risk is a combination of risk (disaster) and opportunity, representing the lower side and the higher the risk.

The expected refund is the expected return in the future while the recognized refund is the actual refund in the past. Risk is uncertainty about the actual return on investment (Jones et al., 2009).

There are two parts to compensation - yield and cash gain. The yield measures the cash flow of the collateral. Significant gains (losses) in appreciation (or decrease) in the value of exchange-traded assets (Jones et al., 2009). Expected returns can be calculated with the saved rate of all possible outcomes (Jones et al., 2009) whereas the risk can be calculated by the difference or standard deviation of the actual return. Real estate risks include low cost, high management, cost of operations, and space risk.

The gross margin ratio is a profit margin that measures how much a company makes to sell its listing. According to Hassan, et al. (2014), total profit reflects how much profit a company has earned after paying variable production costs. This term is used to describe margin profit margins that include operating profit, operating income or return on sales.

Portfolio

In investing, there is a Modern Portfolio Theory developed by Markowitz in 1952. Markowitz said, "Do not pull all your eggs in one basket". Portfolio diversity works to reduce portfolio risk for the investor (Jones et al., 2009).

Sustainability

Sustainability ensures that all businesses, social services, natural resources, economies, and communities have the potential to continue in the future (Schumann, 2010). Sustainable property can be in the form of green buildings or sustainable buildings. Green structures are expected to bring about lower energy consumption and as a result reduce CO_2 emissions (Schuman, 2010). Examples of the application of this sustainable concept include the mixed-use structures, the debris they form, and the plants and parks provided to reduce heat and reforestation.

Property management

Property management includes the day-to-day running of the development, such as selecting tenants, collecting rent, maintaining property and buildings, repairing, paying off debts, and helping to plan and implement financial development (Paris and Kangari, 2005). Professional property managers often handle certain tasks, such as the enforcement of rental unit rules and regulations, the performance of rental market surveys and rental cost planning, preparation, marketing, and display of rental units, accounting reports, site inspections, and rent collection. , repair and maintenance of the rental unit, response to employer complaints, and evaluation and selection of employer (Griswold, 2008).

Property Development

Asset development is an effort to develop assets and create value for goods or services or sites through new projects, improve efficiency, increase revenue, improve sales and reduce the operating costs of the life cycle. According to Hung (2014), property development activities are carried out by real estate developers and business owners in order to improve the physical condition and improve market value. There are four types of property development, namely accessibility improvements, visibility improvements, equipment and equipment upgrades, and site and building renovations (Hung, 2014), which found that property development in a shopping mall can increase visitors.

Inventory

Inventory is a business asset that has a clear purpose for the customer, which includes items sold to finished customers or distributors, such as consumer goods, ongoing work, and finished goods. In real estate companies, real estate for sale is called inventories.

Investment properties

Investment properties include the land, buildings, and infrastructure of companies that are used to earn rental or capital gains or both instead of producing or supplying goods or services or for the purpose of managing or selling in the normal course of business.
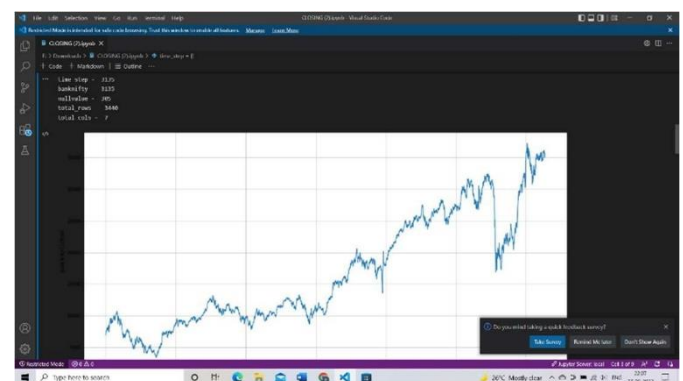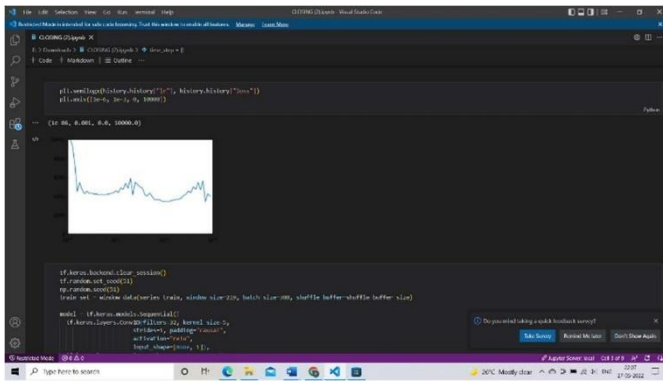
VI. RESULT

Fig 1.2 Graph Bank Nifty Closing(1)

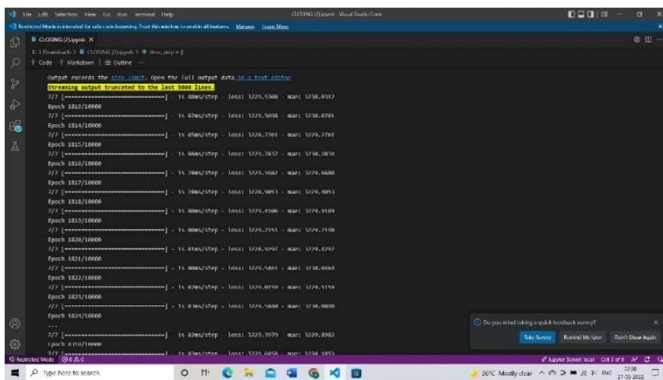Fig 1.3 Graph Bank Nifty Closing(2)

Fig 1.3 Epoch of Nifty

VII. ADVANTAGES

• GET actual-TIME overall performance analysis:
An investment management software program tracks account sports to update you on a portfolio's overall performance. it could help us to distinguish the performance at the beginning and cease of a selected term. you can additionally see actual-time effects, which facilitates you instantly calculate gains and losses.

• Manipulate all your funding debts in one vicinity:
As an investment manager, you could organize numerous stocks and categorize each one for smooth reference. We are able to present all of our investments in a significant area, although funds are issued between a few accounts or locations and have different transaction costs.

• Markets to make informed selections:
The software sets watch lists based on your needs so you can select the right options. It also allows marketers to search for free online sources of potential collateral portfolios

• The value of funding control software program
Most products in the marketplace are priced on a "in keeping with person, per month" foundation and may be divided into three pricing levels based totally on their starting rate.

• Have better investment and finance decisions.
Making Investing easier and easier for everyone. Selection of appropriate assets Develops a Strong Profit Risk Detection and Risk Reduction. A better understanding of Asset Management

VIII. DISADVANTAGES

The main problem with this study is that the various Paid Workers do not make any financial arrangements.
In his research, the sample size is limited to this and the research limitations
Time is limited in this study
Wealthy people choose human counselors Trust problems with inappropriate compliments
Robo Advisors may not be able to deal with size cases and complex or large portfolios
It is a problem if there are many categories of assets

IX. FUTURE SCOPE

Monitor portfolio performance by integrating the latest market conditions.
Identification of investor goals, barriers and preferences.
Performing a portfolio income assessment (comparison of targets and achievements).
Implementing strategies that are aligned with investment objectives.

X. CONCLUSION

Pune is on the verge of growing in a real sense. Not only is it known for its excellent education, but it has also now become a 'Recruitment Center' too. Thanks to higher education, today's people have access to better jobs with higher-paying packages at home. It has become a modern need for working people in India to increase their wealth. Since most people have little financial experience, it is not easy for them to manage their positions on their own. And the risk to working people in India is low. This is due to a lack of sound financial information.

XI. REFERENCES

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