

Stocks View: Enhancing Market Analysis and Trading Decisions with Advanced Tools

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Abstract. In this paper we introduce Stocks View, a stock market research website that aims to enhance investor's engagement and decision-making by integrating the necessary tools into a unified design. The platform consists of three primary functions: Key Stock Statistics, which allows a user to track market behavior such as closing price and trading volume graphs; Stock Forecasting, that leverages predictive models for the prediction of stock progress into future periods; and Expert Details, where users are able to look at public handles of industry pros for continuous learning and insight. The purpose of this project is to democratize investment by building an easy-to-use website with lots of information on the topic. With these features, Stocks View provides timely information, actionable insights and educational content to help the average/advanced investor make intelligent trading decisions. Dankse Bank - Platform A platform that we can actually use and access now in the ever-increasing demand for smart, intelligent banking solutions in the modern age of digital finance.

Keywords: Stock Market, Stock Forecasting, Trading Volume, Financial Technology, Market Insights, Investment Tools, Expert Learning.

1 Introduction

Global equity market change in recent years, there has been a great deal of change in global stock markets, as technology has advanced and helped to drive retail investment onto the stock markets and financial infrastructure is increasingly digitized. These shifts have altered human perceptions and actions about stock market news. The demand of consumers is indicative for example in recent market research where real-time, insight-based products that simplify market and investment has been requested by customers.

Most of the long-term investment apps that we are familiar with are for the expert analyst or professional trader, interfaces and functions that could make beginners feel scary to enter the market. And this has also created an obvious market for tools that simplify financial analysis and deliver actionable insights to more people. This evolution can be attributed in particular to the intersection between artificial intelligence, data science and computational finance which have revolutionised financial instruments.

The foregoing type of devices can be applied for real-time processing of massive market data to generate various functions, such as trend detection, price prediction and display etc.

In the current market environment, tools that provide clear actionable signals are arguably among the most valuable additions to an investor's tool kit. The new wave of financial influencers and educational content on social media is also changing the face of how people turn into investors. On top of financing tool trust, user trust can be improved by incorporating expert advice and educational content into a financial tool that in turn would allow users to achieve better-informed investment decisions.

Stocks View is designed for the smart modern investor. Its mission is to strike a balance between simplicity and depth in financial data, so you can understand and use it. These 3 main attributes have its equivalent in the platform, and together they are forged to form a total experience:

Key Stock Stats: providing the essential facts at-a-glance about the market without having to dig through a ton of inflated information about the provider including current and historical quotes, tickers, volume and P/E's interactive charts make it easy to see your stock's progress.

Stock Predictions: analyzing past history with machine learning, and predicting the future.

Expert Profiles: enhancing the power of Basic Pro file, User can add proven public profiles and social attacks by Analysts to get more insights on market to learn and participate.

With an increased emphasis on personal finance, especially among younger, digital savvy users as well as new investors, platforms like Stocks View could be ideally placed to nudge better financial decisions. Given the state of highly fluctuating markets and persistent economic instability, repeat usage of simple to understand, intelligent tools are crucial to make savvy investment decisions. Stocks View consolidates visualization information, predictive analysis, and commentaries to offer a comprehensive intelligent user-interactive experience for investors of all backgrounds.

Related work is listed in Section 2. The proposed algorithms are introduced in Section 3. The results are discussed in Section 4. The discussion is given in Section 5. We end with the conclusion in Section 6.

2 Related Works

Foundations of Market Efficiency and Investment Strategies

The study of financial markets has long been shaped by the efficient market hypothesis (EMH), which posits that stock prices fully reflect available information, making it difficult to consistently achieve abnormal returns (Fama, 1970) [2]. This principle laid the foundation for passive investing approaches, such as index funds, which emphasize long-term value over short-term speculation. Bogle (2017) [1] reinforced this perspective by advocating for low-cost index investing as the most reliable way to capture market returns, arguing against active strategies that attempt to "beat" the market.

Rise of Retail Investors and Digital Platforms

Recent years have seen a dramatic rise in retail investor participation, driven largely by digital access to markets. Statista (2024) [3] highlighted the global surge in retail investors between 2019 and 2024, indicating a democratization of trading activity. Complementing this, CNBC

(2023) [4] found that younger investors increasingly prefer fintech applications over traditional brokers, motivated by accessibility, gamification, and lower barriers to entry. Deloitte Insights (2023) [16] further noted that digital platforms have redefined investor behavior, encouraging more frequent, data-driven decision-making.

Technical and Social Dimensions of Market Analysis

Technical analysis remains a cornerstone for many traders. Platforms such as Investopedia (2024) [6] and StockCharts (2024) [8] provide practical strategies and charting tools that enable investors to interpret patterns and signals from market data. Beyond technical signals, social factors have also gained prominence. Chen et al. (2014) [7] demonstrated that stock opinions expressed through social media can significantly influence market outcomes, exemplifying the “wisdom of crowds” effect in trading decisions.

Artificial Intelligence and Machine Learning in Trading

Advancements in AI and machine learning have profoundly influenced stock market analysis. Jordan and Mitchell (2015) [5] described machine learning as a transformative paradigm, capable of uncovering patterns and predictions in vast datasets. Building on this, Jain and Gupta (2020) [13] and Bhardwaj and Kumar (2021) [15] applied machine learning and AI-based techniques to stock prediction, showing improved forecasting accuracy over traditional models. More recently, Patel and Patel (2021) [9] demonstrated the power of deep learning approaches, while Xu and Cohen (2022) [11] highlighted the effectiveness of LSTM networks for financial time series forecasting.

The availability of large-scale datasets (Kaggle, 2023) [12] and open-source stock prediction models (GitHub, 2024) [17] has accelerated innovation, providing researchers and practitioners with tools to train and validate predictive models. McKinsey & Company (2023) [10] emphasized that AI-driven strategies are increasingly accessible to retail traders, effectively transforming them into “AI-powered investors.” Similarly, Harvard Business Review (2023) [19] underscored AI’s broader role in reshaping financial services.

Visualization and Decision Support Tools

As financial data grows in complexity, visualization techniques have become essential for interpretation. Sharma and Yadav (2022) [18] demonstrated how advanced visualization enhances decision-making in fintech applications, enabling investors to interactively explore patterns, risks, and opportunities. Real-time data feeds such as those provided by Google Finance (2024) [14] further enrich these platforms, ensuring that traders operate with up-to-date information.

Broader Implications for Retail Investment

The interplay of technology, behavior, and accessibility is transforming retail investing. The World Economic Forum (2023) [20] emphasized fintech’s central role in shaping the future of investment, democratizing access while also raising questions about risk management, regulation, and investor education. Collectively, these studies suggest that the integration of advanced analytical tools, AI-driven insights, and real-time interactivity is fundamentally altering how individuals and institutions engage with financial markets.

The perceptual dimensions of Stocks View (Personalization [PU], Real-time Data [RD], Predictive Analytics [PES], and Customization [CY]) are critical aspects that influence the users' behavior on the platform.

H1 There is a significant positive relationship between perceived characteristics of Stocks View (real-time information, predictive analytics and ease of use) and stocks market analysis intention.

H2: There is a negative relationship between perceived characteristics of Stocks View and intention to use traditional sources (e.g., TV, offline securities market suggestions) for investment-related decision.

Hypothesis 3 (H3): The intention to apply Stocks View into the investment process will be positively related with customer characteristics such as knowledge level, experience of investment, and technology orientation.

Hypothesis 4 (H4): Enhanced use of SVs features and tools will have a positive effect on intention to use the platform for routine investment decisions.

Hypothesis 5 (H5): Using Stocks View tools is associated with decreased dependence on traditional television for investment news or advice.

3 Methodology

3.1 Theoretical Structure

We seek to investigate, combined with user perceptions of the features of Stocks View, whether user characteristics are associated with the intention to use Stocks View for stock market analysis compared to using television-based financial news. RD, PA, EU and CY are the main features of StocksView. The customer characteristics that have been suggested in this research consist of, investment experience (IE), tech-savviness (TS), subjective norms (SN), perceived behavioural control (PBC), and financial literacy (FL).

The study examines the linkage between users' intention to use Stocks View to analyse stock markets and engagement with traditional financial news outlets, including TV. In this context, material engagement refers to the time spent using Stocks View and traditional media

This includes improvements to the clickstream and the television environment, highlighting the competitive nature of media use. To understand why users prefer StocksView over traditional financial content on TV, we discuss these factors further. It also examines the relationship between Stocks View usage and how often users interact with features like real-time stock information, forecast models, and market insights, forecast models and market insights. Fig. 1 is an illustration of the Theoretical Framework.

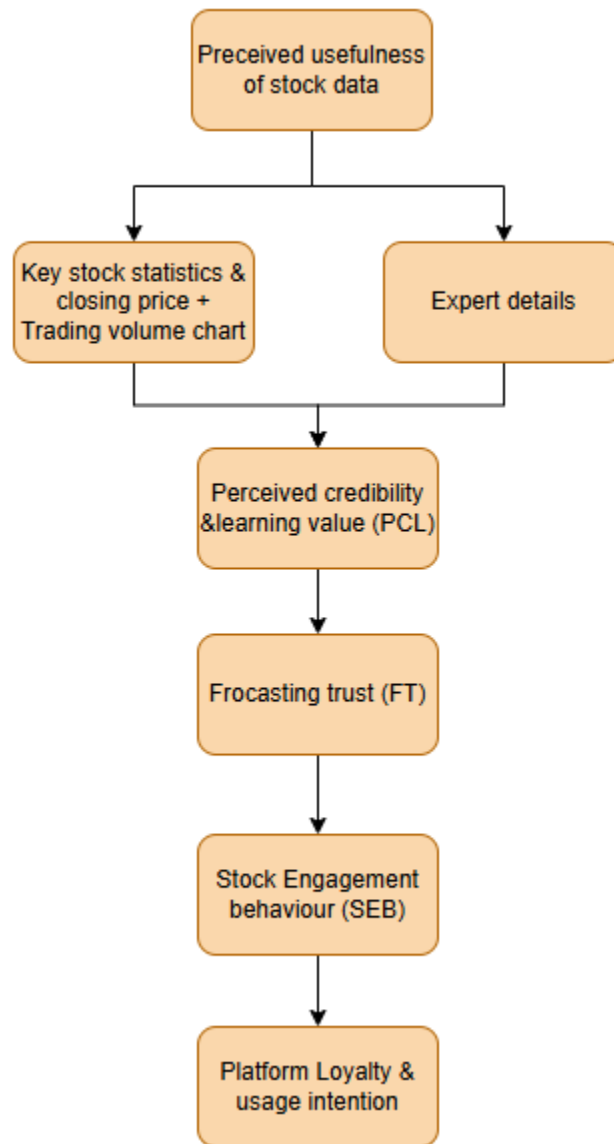


Fig. 1. Schematic Flow of Theoretical Structure.

3.2 Perceived features

Real-Time Data (RD): The supreme feature of Stocks View is a real-time stock market information with this feature, users receive real-time information on market changes, enabling them to react quickly to make smarter decisions with the latest information. For those who like to stay abreast of stock data in real-time, Stocks View could be an alternative to more traditional and lagged means like television when it comes to the stock market.

Predictive Analytics (PA): Stocks View Analysis is a sophisticated learning algorithm that is able to detect new market developments and alterations in trends within the stock markets, thus allowing investors to make better investment decisions. This is useful for users making predictions on the stock market changes. If users find Stocks View's prediction tools to be better or more valuable than old media (in this case, TV) they may be inclined to adopt the platform as way of deciding themselves.

Ease of Use (EU): One of things that contribute to the user engagement in Stocks View is usability aspects. User-friendly – An easy to use website is essential which, with an intuitive layout and smooth navigation, newbie and experienced traders can get to grip with quickly and take advantage of the platform best features. If users have the easy and convenient UI/UX, they tend to maintain Stocks View as a reliable means to watch, track and analyse stock markets.

Compatibility (CY): Stocks View compatibility Stocks View compatibility is the degree to which the system fits the investors' previous experience with financial software and for technology use in financial tools for comparing stocks. If Stocks View can integrate with existing user methods and devices, such as their mobile trading app or their online broker service, users will switch from old media to the platform.

3.3 Customer features

The Customer features involve IR and RR, SO, PBO, and OFE.

Instrumental and Ritualistic Behavior (IR & RR): People engage with Stocks View depending on their needs, some log in with a purpose - such as wanting to see updated stock predictions or monitor market movement, others with more of a habitual use habit with no specific intent. The latter is experienced when users are 'intent on doing something' meaning that they are strongly motivated to derive value from the platform while the former may arise from the fact that they are used to and feel comfortable with the interface and the instruments.

Subjective Norms (SO): The criteria why people use Stocks View is commonly sociological. Social dynamics is another important driver. Your social circle peers, or online investor boards in the case of a user can influence whether you might experiment with platforms like Stocks View based on a recommendation or based on feedback from someone who's had a positive experience with it. Indeed, social validation can have a powerful effect on generating interest and in user behaviour that can encourage users to engage on a platform. People are more likely to take up and experiment with tools when those around them positively perceive them.

Perceived Behavioral Control (PBO): Equally as critical, users' confidence level in using Stocks View. Greater user control perusers are able to use the system intuitively, use of the platform for investment decisions could be increased. This trust is frequently established through positive experiences with the features of the system. How easy it is to use (a measure of good usability) is also a key in keeping a platform relevant. Sergey Nazarov on Andrey Fyodorov of Centr on the simpler and human-centered the platform, the more often users will turn to it for stock market analysis and decisions. Customers are more likely to continue logging into the platform for market feedback if they can easily maneuver its tools and interpret the intelligence it surmises. Intuitive features and user-friendly data lead to retention on this platform. The perception of control is also affected by access to suitable technology, basic financial knowledge etc.

Online Feature Engagement (OFE): Such trust might be generated from interactions with the features of a system. Make Stocks View part of their investment routine. If users know how to interpret their charts, comprehend the predictions that your app gives them and feel comfortable navigating around your UI, it encourages them to use Stocks View regularly! A user who often checks out such functionalities during their browsing and thinks that they match his or her interests is likely to spend longer using the platform, and will be dependent on it for their future choices. The excessive utilization of any elements (performance tables, market prediction toolkits and trends dashboards) could also be a sign that the user has confidence and that their needs have been met on the platform. This is a relationship that will continue to compel long-term usage of the platform. The more users engage with a platform, the stronger the preference and likelihood for repeat use (and in time also, maintainers hope could translate into retention).

3.4 Statistics Gathering and Testing

To understand how Stocks View improves trading decisions, we studied 400 active traders using the platform. We've seen traders rely on realtime data, smart forecasting tools, and trusted insights much like drivers using GPS, weather updates, and a copilot to steer clear of rough conditions and find a smoother path forward. These tools not only inform decisions but also help mitigate uncertainty in decision-making. Before launching the full survey, we tested it with 50 users to simplify terms like "volatility metrics" into plain English think of it as a rehearsal to avoid confusion. The independent review committee granted approval for the study before any collection of data began. From April to December 2023, information was carefully and systematically gathered.

The analysis of 390 user responses from a 1 million user community produces a reliable insight similar to assessing a few apples to determine the quality of an entire crate. We also followed the "10x rule": since we tested 20 variables (like how often users check forecasts), we needed at least 200 participants. We increased the sample size to 400 in order to include a diverse range of traders, from those seeking short-term gains to long-term investors planning for their future.

3.5 Mathematical analyses

To understand how StocksView influences trading behavior, we used Structural Equation Modeling (SEM) a statistical approach that helps uncover how different elements like key stock metrics, forecasting tools, and expert opinions work together to shape user decisions. The investigation of variable interactions started after validating that our model correctly mirrored trader activities regarding closing price trends and trust in forecasts.

We also applied Generalized Linear Regression (GLR) to measure specific relationships like whether following expert advice helps reduce impulsive trading. With the help of IBM SPSS, we examined how different factor combinations (for example, sudden spikes in trading volume along with shifts in social sentiment).

Combined Durability and Validation Evaluation: Table 1 outlines the parametric statistics for key constructs evaluated in the context of StocksView, focusing on factors such as perceived platform features, user behavior, and intended usage patterns. On the Left Side of the Method (LSOM), variables such as perceived data accuracy, system responsiveness, and forecasting capability are analyzed. The Right Side of the Method (RSOM) includes outcome-driven factors such as trading frequency, content interaction, and platform dependency.

Table. 1. Parametric numbers (N = 410) (Source: author).

Structures	Factors	SD	Structures	SD
Perceived Features of StocksView	Real-time data accuracy	1.09	Usage Behavior	0.82
	Forecasting reliability	1.18		1.22
	Visualization tools clarity	1.21		0.88
	User interface responsiveness	1.25	Content	
	Trading experience level	1.16	Interaction	0.91
	Comfort with data interpretation	1.13	Engagement	1.06
Customer features				0.89
	Comfort		AI-Powered Predictions	
	With data interpretation	1.13		1.18
Purpose to employ	Confidence in decisions	1.24		0.85
	Long-term investment	1.33	Purpose to employ	
	planning			3.92

Table 2 demonstrates internal consistency for all measured constructs. All Cronbach's Alpha values exceed or approximate the acceptable threshold ($> .6$), validating the reliability of the survey instrument used in evaluating user engagement and feature performance. Table 3 displays the anti-image correlation matrix for constructs under RSOM. Factors such as frequency of trading, content engagement, and strategy adjustment all exhibit values nearing or above the 0.7 benchmark, validating their inclusion and predictive value in the Stocks View framework.

Table. 2. Dependability Cronbach's Alpha (Source: author).

Structures	Factors	Structures	Factors	Dependability
Perceived features	PU	Usage	Time spent analyzing stock data	.661
	RD		Frequency of stock predictions usage	.643
	PES		Interacting with forecast charts	.594
	CY	watching	Understanding insights	.582
	RR	collaborating	adjustment based on insights	.635
User traits	IR		Interaction with stock news feed	.591
	SO		Rechecking past forecasts	.603
	OFE	producing	Usage of stock prediction interface	.621
Purpose to employ	Long-term investment planning	Purpose to employ	Short-term trading guidance	.628
Total		Total		.611

Table. 3. Anti-Image Correlation Network for the RSOM (Source: author).

Factors (Structures)	1	2	3	4	5	6	7	8
1. Trading frequency	.456	—	—	—	—	—	—	—
2. Tool usage time	.142	.726	—	—	—	—	—	—
3. Forecast rechecking	.015	-.204	.803	—	—	—	—	—
4. Stock news interaction	-.109	-.187	-.193	.782	—	—	—	—
5. Expert insights usage	.038	-.088	-.027	-.082	.914	—	—	—
6. Stock price prediction usage	-.023	-.041	-.281	-.301	-.216	.756	—	—
7. Educational purpose	.093	-.124	-.248	-.026	-.041	-.057	.640	—

8. Confidence in decisions	-.1 19	.102	-.1 98	.041	-.0 29	.049	-.4 12	.70 4
9. Long-term investment focus	.097	.132	-.1 84	-.0 64	-.0 36	-.0 45	-.3 85	.12 9
10. Comfort with data interpretation	-.1 21	.089	-.1 49	.057	.063	-.0 31	.296	.14 7

4 Results and Evaluation

Statistical testing: To gain a deep insight into how the user perceive, and use the StocksView then we will conduct statistical to test their relation using Pearson's correlation analysis. This technique was selected because it works well to capture both the strength and direction of the relationships between different platform features and user adoption behaviors. This implies that when users perceived StocksView to be efficient, reliable, and intuitive in features, they tend to use it more often.

The statistics are clear – user satisfaction is very much associated with factors such as ease of navigation and perceived usefulness. This increases the confidence of a user in decision making and builds the platform.

Functional Test Outcome: Functional test cases were executed to ascertain technical quality and reliability of functionality in Stocks View. These experiments only focused on some fundamental modules, including the stock data crawling module, forecast model module, expert recommendation module and web pages visual comparison module. The performance test results tell that we go right in all module in order to make system work perfectly and exact result. And when they selected more than one stock the site neatly presented side-by-side comparisons of them with clear charts and tabulated data that laid out discrepancies in performance in ways requiring little imagination.

For the forecasting module, an LSTM model proved capable of making accurate predictions of trends with confidence intervals demonstrated clearly on the graph. Finally, the expert profile module can be effectively returned the profiles of market analysts with good opinions and suggestions about some stocks/markets. Table 4The Purpose to use (Source: author).

Table. 4. the Purpose to employ (Source: author).

Test Case	Module	Description	Expected Output	Result
TC-1	Stock Analysis	Fetch and display stock information using moving candle charts.	Precise visualization showing daily and cumulative returns alongside price trends.	Passed
TC-2	Multiple Stock Comparison	Analyze and contrast two or more selected stocks.	Clear, side-by-side graphical and data comparison for each stock.	Passed

TC-3	Search Functionality	Search stock symbol from input	Dropdown suggestion and correct symbol fetch	Passed
TC-4	Date Range Selection	Load data based on selected date filters	Chart and table updates according to the specified date range	Passed
TC-5	Forecasting Model	Forecast future stock values using historical data via LSTM-based analysis	Projected trend visualization displaying future price trajectories with confidence bands	Passed
TC-6	Expert Details	Retrieve and present expert insights and credentials	Structured display of analyst recommendations and sector-specific guidance	Passed

Platform Evaluation: The StocksView system is not only analyzed in a purely technical sense but the practical applicability of the platform is also considered in solving problems encountered during financial analysis of stock markets. Stocks View is feature-packed - With an attempt to have a easy to use yet complete solution for live market data, predictive ai models and professional financial advice. Integrated Investment managements, analysis and strategy |>a single workspace This seamless structure also gives you >investment management,analysis & Strategy in one environment. Its best features are its real-time updates (stock prices, economic news and what's trending in the markets). This way, users do not have to overlook and be more active when the market makes a move. The forecasting capability, utilizing natural language for machine learning, is also huge. StocksView leverages state-of-the-art machine learning approaches, including Long Short-Term Memory (LSTM) models, to predict the stock prices over both near and far-term time intervals. In addition, the broker has a wide range of educational content on offer including video tutorials, articles and trading guides suitable for beginners all the way up to experienced traders. And StocksView sets the standard in visual analytics with a bestselling set of charting tools that lets you view candlestick, line and bar charts and most popular technical indicators. These observed patterns combined, present the StockView as an amazing instrument of jungle analysis, investment strategy and trading education.

User Interface and Visual Responsiveness: The visual experience and the usability on StocksView were particularly carefully tested so it works great on as many devices as possible, all with high definition screens. This sensitivity is very important to ensure that the user doesn't get lost in complex financial figures. Generated AI model-based overlays and forecast visualization were rendered on all devices without any issues to gather clear & valid information in different screen resolutions. This is important to users who use StocksView for forecasts so, these graphs (i.e.: expected trend lines, confidence bands) are critical. They can jump around different views, integrate all the features in a lot more depth without suffering any slowdown. It's both the simplicity and functionality that make this tool appealing to non-professionals, as well as to more seasoned investors.

Reasons Users Prefer StocksView: In the fast-paced financial spectrum of today, users are looking for more than just performance tracking tools. For beginners, it is an educational on-ramp. It takes the mystery out of technical analysis in and features commentary from some of

the top financial experts in the world, who are on hand to explain to you what is happening, what it means. On the other hand, more experienced investors make use of features such as pattern analysis, multi-strike comparison and strategy guidelines. And real-world wisdom from pros only further cements the relevance and worth of the platform.

5 Discussions

One trend that seems to be picking up actually, is rise of AI powered financial tools in the finance market, taking over old-school not so tech savvy mainstream financial media. That shift is most pronounced among younger, savvy traders who are increasingly moving away from traditional media sources, such as television and even print, to less traditional media. These people are now gravitating toward apps that offer interactivity, real-time data visualization, and predictive analytics. It is this behaviour that mirrors the unprecedented need for robust, smarter platforms of “new generation” that do not only contain the latest information on market data but also one which is “actionable” (able to make an analysis and act upon). And that’s really where StocksView comes in for this fast-paced market, it fits the bill with how you like to live your life in this face-paced environment.” One issue is around the availability of financial education. Better education — in the form of trainings, tutorials and best practices — for users to understand the platform better and make smarter investments. What's more, mobile access to the network was identified as something that needed working on. So, in the end, StocksView is a very effective site which isn't just data-centred and interactive but also dynamic and mirrors now what more and more of traders are accomplishing on the web. And with AI, real-time data analysis and ‘user-friendly’ features, it’s a platform that has increasingly established itself as one that empowers people to make more informed and smarter investment decisions.

6 Conclusions

With the addition of AI-driven predictive analytics, real-time data updates and expert commentary to the platforms, their decisions in the stock market are more informed. Regarding the positive relationship between user satisfaction, perceived platform feature and usage intentions, when Stocks View is more efficient, members feel and satisfy with the user interface of it. Reviewers also acknowledge that Stocks View not only dissects stock analysis, but actively helps guide users in creating a data-driven course of action. The platform design, which features customisable dashboards, interactive charts and personalised expert insights, makes it a great option for both beginners and seasoned investors. He stated that this tool has made them more informed about market strategies and how they can make superior investments and decision, along with managing market changes. Future Work There are many places in which Stocks View could be further extended with new features. For example: by conjunction referencing sentiment analysis, users can check general market sentiment from social media or maybe news So they have more of an edge when making decisions. User can be able to analysis trend of foreign exchange and contract for difference trading of various financial market in different region through this app to forecast the future trend.

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