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ARTIFICIAL INTELLIGENCE IN FINANCE WITH SPECIAL REFERENCE TO HERTZ ENTERPRISES ELECTRICALS, AT HOSUR.

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ABSTRACT

Business analytics (BA) is a multidisciplinary field that leverages statistical analysis, data mining, predictive modelling, and optimization to drive informed business decisions. With the rise of big data and advanced computing, BA has evolved to encompass descriptive, predictive, and prescriptive analytics, supporting decision-making across various industries. This article reviews the core concepts, key components, and emerging trends in business analytics, highlighting its role in enhancing organizational efficiency and competitiveness.

Key terms : Business analytics, data mining, predictive modelling, descriptive analytics, prescriptive analytics, data visualization.

INTRODUCTION

Business analytics (BA) has emerged from the broader discipline of decision sciences and has rapidly evolved with advancements in big data and computing technologies. Initially rooted in operations research and decision support systems, BA now integrates machine learning, artificial intelligence, and cloud computing to enable data-driven decision-making. Industries such as retail, healthcare, finance, and logistics are at the forefront of BA adoption, focusing on customer behavior analysis, risk management, and operational efficiency.

Recent research trends in BA include real-time analytics, ethical AI and data governance, integration of unstructured data (such as social media and video), and human-centric analytics for improved decision-making.

RESEARCH BACKGROUND

Business analytics (BA) is a multidisciplinary field that uses statistical analysis, data mining, predictive modelling, and optimization to drive informed business decisions. The field emerged from the broader discipline of decision sciences and has rapidly evolved with the advent of big data and advanced computing technologies. Early research in business analytics focused on **operations research** and **decision support systems**. As data availability increased, the focus shifted toward **data-driven decision-making**, integrating technologies such as **machine learning**, **artificial intelligence**, and **cloud computing**.

MEANING AND DEFINITION

Business analytics is the practice of using data, statistical analysis, and modelling to gain insights and make informed business decisions. It transforms raw data into meaningful information, driving both strategic and operational improvements.

BA helps organizations understand past performance, predict future trends, and optimize business processes. It bridges the gap between data and decision-making, supporting actions that enhance efficiency, profitability, and competitiveness.

IDENTIFIED PROBLEM

Lack of automation in recurring tasks such as payment reminder and invoicing. Delay in monthly closing due to scattered records and reconciliation issues.The Finance team has limited flexibility to work or from home, which can be drawback, especially in situations where on site presence isn't mandatory for all tasks.

OBJECTIVES OF THE STUDY

To Identify the current and future use of AI in financial services.
Apply business concepts and theories to real-world decision making.
Observe and participate in business operations and decision making.
Expand network of professional relationships and contracts. Develop a solid work ethic and professional demeanour, as well as commitment to ethical conduct and social responsibility.

REVIEW OF LITERATURE

Business analytics has become increasingly integrated with artificial intelligence (AI), especially in the financial sector, where the demand for data-driven decision-making is high. Recent studies highlight how AI techniques such as machine learning, natural language processing, and deep learning are transforming financial analytics (Gupta & George, 2020). These technologies enable real-time risk assessment, fraud detection, customer profiling, and algorithmic trading, surpassing traditional statistical models in accuracy and scalability (Nguyen et al., 2021).

The integration of AI in finance is also reshaping predictive analytics. Research by Zhang and Huang (2022) shows that AI-based forecasting models significantly improve the precision of market trend predictions and credit scoring, especially when combined with big data sources such as social media sentiment and transaction history. These advancements are reducing information asymmetry and helping firms gain a competitive edge. However, the literature also notes ethical and regulatory concerns, such as data privacy and algorithmic bias, that may limit the full potential of AI adoption in financial institutions (Rahman et al., 2021).

Despite these challenges, business analytics frameworks are evolving to accommodate AI's dynamic capabilities. The emergence of Explainable AI (XAI) is particularly important, as it helps finance professionals understand and trust machine-generated insights. Scholars such as Li and Chen (2023) emphasize the need for transparency and governance structures in the deployment of AI in financial analytics. Thus, the literature suggests a growing consensus that while AI offers significant opportunities for enhancing financial decision-making, its implementation must be guided by ethical standards and strategic oversights.

The convergence of Artificial Intelligence (AI) and Business Analytics is revolutionizing the finance industry, enabling institutions to enhance decision-making, streamline operations, and mitigate risks. AI's application in finance spans various domains, including fraud detection, trading, compliance, and customer service.

Major financial institutions have leveraged AI to bolster fraud detection systems. JPMorgan Chase, for instance, employs machine learning algorithms to analyze transaction patterns, reducing fraud by 90% and saving the bank approximately $100 million annually . Similarly, Visa's AI system flagged $25 billion in fraudulent transactions, significantly curbing financial crime .

Using the Multivariate regression & Monte Carlo simulation.

Gupta M. & Rajan R. (2021), "Link Between Export Intensity and Financial Success in Quartz Firms". The research analyse financial outcomes based on export intensity using a dataset of 85 quartz exporters in India. Applying ordinary least squares (OLS) regression, variance inflation factor (VIF) checks, and sensitivity analysis, the study identifies export intensity as a major determinant of improved ROA and ROE. Results showed that firms with greater than 50% export revenue demonstrated superior capital efficiency and investor returns.

Dr. Anna Becker -- An Israeli researcher and entrepreneur, Dr. Becker is renowned for her work in algorithmic trading. She founded EndoTech, an AI-driven trading platform, and later established Fianchetto Fund, focusing on AIbased investment analysis.

Jason Kingdon -- A British computer scientist, Kingdon co-founded the Intelligent Systems Lab at University College London, where he introduced the use of neural networks in live financial forecasting. He also co-founded Searchspace, a company that applied AI to detect money laundering and insider trading at banks and stock exchanges.

Dave Cliff -- A professor at the University of Bristol, Cliff invented the ZIP trading algorithm, one of the first autonomous adaptive algorithmic trading systems. His work demonstrated that AI could outperform human traders in certain market conditions.

Liang Wenfeng -- Founder and CEO of

DeepSeek, Liang applied AI techniques to market analysis early in his career. He co-founded HighFlyer, one of China's largest quantitative hedge funds, and later developed DeepSeek, a platform offering AI-driven financial tools.

Aneesh Varma -- Founder of Aire, a fintech company that pioneered the safe usage of machine learning in credit scoring and underwriting. Varma has been a vocal campaigner for financial inclusion and has been recognized for his contributions to the fintech sector.

Gabriel Stengel -- Gabriel Stengel, a former analyst at Lazard, founded Rogo, an AI-driven tool designed to automate tasks traditionally handled by junior investment bankers, such as market assessments and valuation comparisons. Rogo has been adopted by firms like Moelis, Nomura, and Tiger Global, and recently raised $50 million in Series B funding, increasing its valuation to $350 million.

Nicolai Tangen -- Nicolai Tangen, CEO of Norway's $1.8 trillion sovereign wealth fund, has spearheaded initiatives to reduce the fund's annual $2 billion trading costs by 20%, or $400 million, through the use of AI. The AI systems enable better prediction and internalization of market transactions, reducing unnecessary trades. **Richard S. Sutton --** Richard S. Sutton is a Canadian computer scientist recognized as a pioneer in reinforcement learning. His work on temporal difference learning and policy gradient methods has influenced AI applications in finance, particularly in algorithmic trading and risk management.

Jeff Glickman -- Jeff Glickman is an American computer scientist and entrepreneur who founded J4 Capital, a firm specializing in AI-driven investment advisory. His AI system reportedly achieves a 60% success rate in trade predictions, outperforming many traditional investment strategies. financially from export exposure. MSMEs engaged in

RESEARCH GAP

A research gap is an area within a field of study that has not yet been fully explored or answered by existing research. Identifying a research gap helps justify the need for a new

study or investigation.

While Artificial Intelligence (AI) has significantly transformed the finance industry—through fraud detection, algorithmic trading, credit scoring, and customer service automation—its integration with traditional accounting software like Tally Prime remains underexplored. Limited AI Integration in Tally Prime for tasks like automation, forecasting, and real-time insights. Lack of Predictive Analytics tailored for SMEs using Tally Prime.

No Custom AI Models built for Tally's specific data structure.

RESEARCH METHODOLOGY

The research methodology section outlines the systematic approach adopted to investigate the role of Artificial Intelligence (AI) in enhancing financial analytics, with a focus on its integration with Tally Prime. In the context of increasing digital transformation in finance, this study aims to understand how AI technologies are being utilized to automate, analyze, and improve financial processes within organizations using Tally Prime. The methodology defines the research design, data collection methods, analytical tools, and scope of the study, providing a framework for collecting relevant data and drawing meaningful conclusions. This structured approach ensures that the findings are both reliable and applicable to real-world business scenarios.

By clearly defining the research design, sampling strategy, tools, and analytical techniques, this methodology ensures that the research findings are wellfounded and relevant to current industry practices. It also helps identify the existing gaps in AI integration within accounting systems like Tally Prime and proposes ways to bridge them through innovative AI applications.

LIMITATION OF THE STUDY

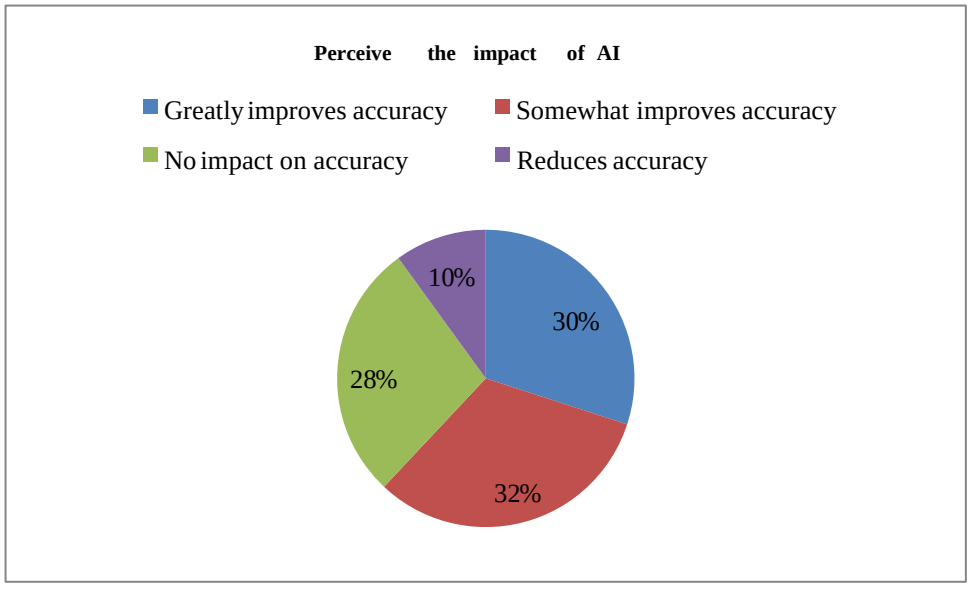
The study has several limitations that may affect the generalizability and validity of the findings. The content size of the study was limited, and the findings may not represent the views and experience of all people involved in the use in AI in Finance. The study also relied on self – reported data, which may be subject to biases and limitations. The study did not include a quantitative analysis of the data, which may have provided a more robust and comprehensive analysis of the phenomenon under investigation. Despite these limitations, the study provides valuable insights and understanding of the impact of AI in Finance and contributes to the existing knowledge and research on the topic.

DATA ANALYSIS AND INTERPRETATION

Table 1. The impact of AI on the accuracy of financial forecasting

Greatly improves accuracy	Somewhat improves accuracy	No impact on accuracy	Reduces accuracy
15	16	14	05

Chart 1. The impact of AI on the accuracy of financial forecasting



INTERPRETATION:

32% of the respondents have said somewhat, AI will improves the accuracy of the financial forecasting.

30% of the respondents have said AI greatly improves accuracy of the financial forecasting.

28% of the respondents have said there will be no impact on accuracy through the AI in the financial forecasting.

10% of the respondents have said the AI will reduces the accuracy in the financial forecasting.

Table 2. AI in help with improving operational efficiency in your Organization

Significantly	To some extent	Not much	Not at all
12	15	13	10

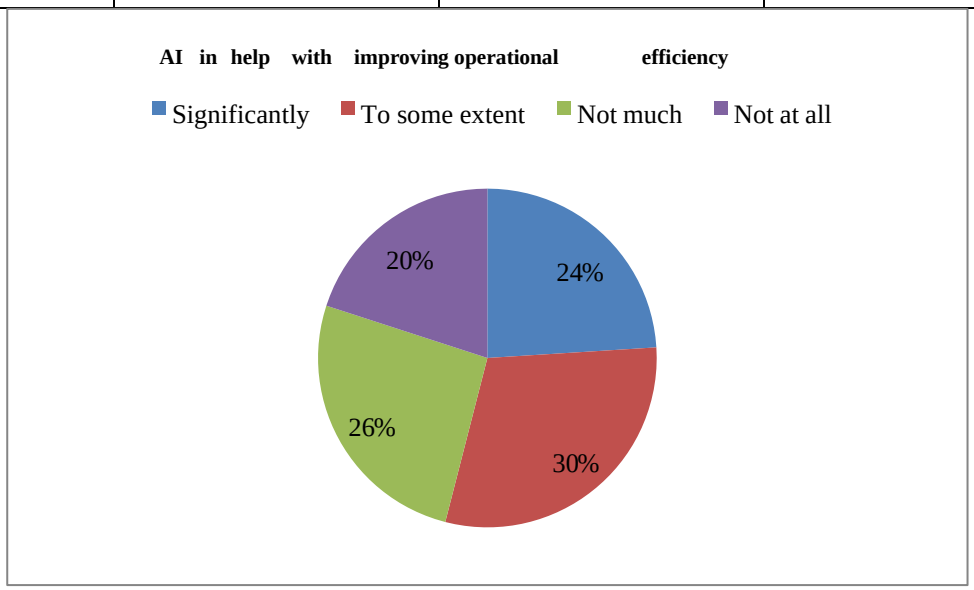


Chart 2. AI in help with improving operational efficiency in your

Organization INTERPRETATION:

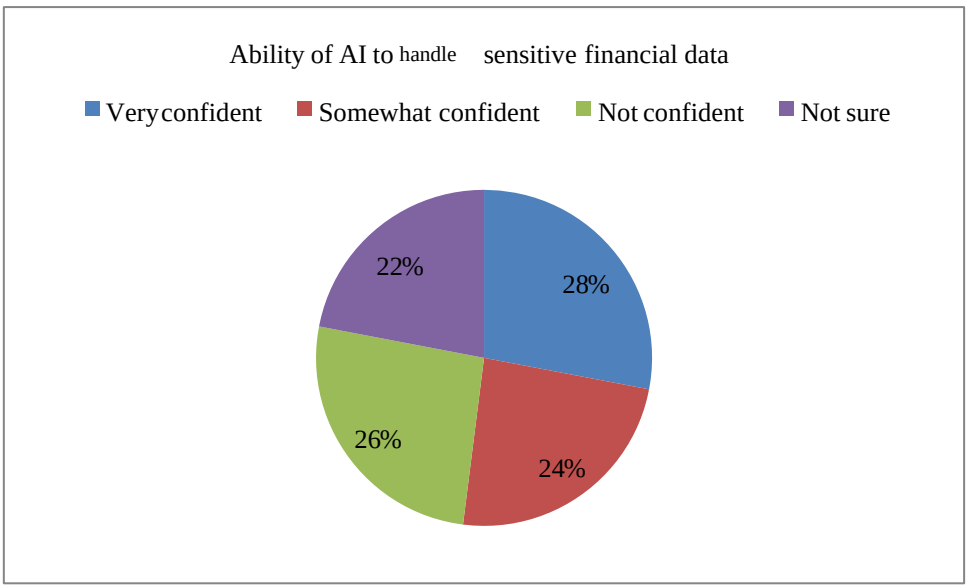
20% of respondents of have chosen AI not at all help in the improving the efficiency of the organization.

24% of respondents of have chosen AI significantly helps in improving the efficiency of the organization. 26% of respondents of have chosen AI not much helps in the improving the efficiency of the organization. 30% of respondents of have chosen AI helps in some extent in the improving the efficiency of the organization.

Table 3. The ability of AI to handle sensitive financial data

Very confident	Somewhat confident	Not confident	Not sure
14	12	13	11

Chart 3. The ability of AI to handle sensitive financial data



INTERPRETATION:

22% of the respondents are not sure about the ability of AI to handle sensitive financial data.

28% of the respondents are very confident about the ability of AI to handle sensitive financial data.

26% of the respondents of are not confident about the ability of AI to handle sensitive financial data. 24% of the respondents are somewhat confident about the ability of AI to handle sensitive financial data.

SUMMARY OF FINDINGS

1. Risk associated with the cyber security are a major worry for financial organisations utilising AI . Financial companies must spend money on the cybersecurity measures to safeguard their customer's data .
   Financial organizations need to be aware of how
2. AI can effect the workplace. To make sure that staff members are prepared to deal with the AI and adjust to market developments, they may need to reskill and upskill them .
3. They way that financial institutions use AI algorithms must be open and transparent. This will ensure that choices are made properly and without bias and help establish confidence with the customers and regulators .
4. The effectiveness of AI algorithms depends on the quality of the data. Financial firms must spend money on data governance and quality control procedures to guarantee the accuracy and dependability of their algorithms.
5. Financial institutions

6. need to make sure their AI systems are impartial. 6. can be accomplished by including ethical considerations into the development process and training algorithms on a variety of
   data sets

7. 7.Although artificial intelligence (AI) can automate many financial operations, many clients still value human interaction. In order to serve the demands of all clients, financial institutions should think about the providing a variety of services that blends automation powered by AI with human engagement.
8. 8.Finally, financial institutions need to be prepared to spend money on developing and using
   a. AI technologies.
   Although a considerable financial investment will be needed, there could be tremendous rewards.

CONCLUSION

In conclusion, a number of ways in which artificial intelligence (AI) has the potential to revolutionize the financial sector. Financial companies may enhance decision – making, reduce expenses, and enhance customer service by utilising the power of AI. Financial institutions must, however, be aware of the difficulties and dangers posed by the technology in order to realise this potential. They must be also attempts to create solutions that reduces the dangers making more accurate forecasts and choices is one of the main benefits of AI in banking, Financial
organisations can use the information to improve manual procedures used in Finance.
investment choices, identify fraud, and cater services to individual clients. AI can also automate a lot of the

DIRECTIONS FOR FUTURE RESEARCH

As the financial industry continues to evolve with the advancement of technology, the intersection of Business Analytics and Artificial Intelligence (AI) presents vast opportunities for future development. Moving forward, several directions can be pursued to enhance the practical application and strategic impact of these technologies. Integration with Real-Time Data Streams: Future systems should leverage real-time analytics to enable faster decisionmaking in areas such as fraud detection, trading, and personalized financial services.

Explainable and Ethical AI: Developing transparent AI models with explainability features will be essential for building trust among users and complying with regulatory standards, especially in high-stakes financial decisions. Advanced Predictive and Prescriptive Analytics: Expanding the use of predictive and prescriptive models can lead to more accurate forecasting and proactive risk management strategies. Adoption of CloudBased Analytics Platforms: Cloud infrastructure can support scalable AI models, making analytics more accessible to mid-sized and smaller financial institutions.

Personalized Financial Products: AI and analytics can be further used to create hyperpersonalized products and services tailored to individual customer behaviors and financial goals. Enhanced Cybersecurity and Fraud Prevention: Future systems should incorporate advanced anomaly detection and behavioral analytics to stay ahead of evolving financial cyber threats. CrossDisciplinary Collaboration: Encouraging collaboration between data scientists, financial analysts, regulatory bodies, and AI ethicists will ensure balanced and
responsible innovation

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