Survey on Financial Management System

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***Abstract*—This paper explores the latest developments in financial management systems, emphasizing the influence of artificial intelligence (AI), machine learning (ML), and big data technologies. It evaluates ten research studies that showcase trends, methodologies, and challenges associated with incorporating predictive analytics and data-centric decision-making in personal finance. The review highlights how these intelligent technologies contribute to automated insights, better investment decisions, and enhanced financial health.**

Keywords*— *Financial Management Systems, AI in Finance, Machine Learning, Predictive Analytics, Personal Finance, Expense Tracking, Data-Driven Decision Making

I. INTRODUCTION

The integration of AI, ML, and big data has significantly altered the landscape of personal and organizational financial management. Traditional methods that relied on manual budgeting and static data analysis are now being replaced by intelligent, adaptive systems. These modern solutions provide enhanced accessibility, personalized financial recommendations, and real-time analysis.

Advanced financial systems utilize AI and ML to simplify processes like budget tracking, spending analysis, and investment planning. For example, ML algorithms can detect behavioral spending patterns, predict upcoming expenses, and dynamically adjust financial plans. Robo-advisors and intelligent support systems play a key role in offering customized investment strategies at a reduced cost. These advancements allow even novice users to manage finances effectively and make well-informed decisions.

This survey evaluates ten significant studies that highlight the practical application of AI, ML, and big data in financial domains—ranging from expense tracking to enterprise finance. The objective is to provide a holistic view of current intelligent financial tools, their methodologies, key features, and future directions. The paper also discusses the limitations and potential avenues for future research.

II. LITERATURE SURVEY

[1] Presents a basic expense tracking system designed for simplicity and user-friendliness. It enables categorization of expenses and helps users understand their spending patterns using visual data representations.

[2] Describes a smart tracker that applies AI techniques to monitor daily expenses. It uses historical data and machine learning models to suggest budget adjustments based patterns, fostering better financial discipline.

[3] Highlights the use of data analytics in improving budgetary control. It combines predictive models with user data to anticipate potential financial risks, enhancing financial stability.

[4] Discusses how big data integration enhances expense prediction accuracy. It emphasizes the scalability and personalization benefits of big data in financial applications.

[5] Focuses on how AI and ML support investment strategies like robo-advisory services and algorithmic trading. Personalized investment portfolios and optimization techniques are key outcomes of this research.

[6] Explores a hybrid model of predictive analytics and expense monitoring. It forecasts future expenditure trends and improves budget accuracy for more effective resource planning.

[7] Analyzes the functionality of robo-advisors in personal finance, showing that these AI-driven platforms can offer competitive returns at lower advisory costs compared to traditional services.

[8] Investigates financial strategies specific to IT startups, particularly in the growth phase. The study offers insights into sector-specific cash flow and financing approaches.

[9] Examines the link between financial literacy and individual financial outcomes. It suggests that incorporating educational modules in finance tools can empower users to make smarter decisions.

[10] Introduces a data-oriented decision support system (DSS) that leverages ML models to offer personalized financial recommendations based on individual behavior patterns.

Table 1 : Comparison Table

Paper	*Methodology*	*Focus Area*	*Key Contributions*
EXPENSE TRACKER	EXPENSE CATEGORIZATION, VISUALIZATION	SPENDING TRACKING	SIMPLE AND INTUITIVE TRACKING
AI TRACKER	AI, PREDICTIVE ANALYSIS	REAL-TIME TRACKING	BUDGET FORECASTING & MANAGEMENT
DATA MODEL	DATA-DRIVEN ANALYTICS	BUDGET OPTIMIZATION	EARLY RISK DETECTION
BIG DATA ANALYSIS	BIG DATA INTEGRATION	PERSONALIZED INSIGHTS	SCALABLE FINANCE APPLICATIONS
AI IN INVESTMENTS	ML ALGORITHMS	INVESTMENT STRATEGIES	AUTOMATED TRADING, OPTIMIZED PORTFOLIOS
ML FORECASTING	PREDICTIVE ANALYTICS	RESOURCE ALLOCATION	IMPROVED BUDGET PLANNING
ROBO-ADVISORY	AI GUIDANCE TOOLS	INVESTMENT MANAGEMENT	COST-EFFICIENT FINANCIAL ADVISORY
ENTERPRISE FINANCE	SECTOR-BASED FINANCING	IT BUSINESS GROWTH	CUSTOMIZED FINANCIAL STRATEGIES
FINANCIAL LITERACY	EDUCATION TOOLS	PERSONAL FINANCE	IMPROVED DECISION-MAKING
DECISION SUPPORT	ML MODELS	USER-SPECIFIC RECOMMENDATIONS	TAILORED FINANCIAL ADVICE

III CONCLUSION

The reviewed studies underscore the transformative impact of AI, ML, and big data on financial management practices and investment strategies. These technologies facilitate personalized insights, improved budget control, and cost-effective financial services. Future advancements should prioritize data privacy, user engagement, and seamless cross-platform integration. With continuous innovation, intelligent finance solutions will further simplify personal financial management.

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