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التحليل التنبؤي المعتمد على البيانات الضخمة في اتخاذ القرار الاستثماري

Predictive Analytics Based on Big Data for Enhancing
Investment Decision-Making

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Introduction:

In recent years, the rapid growth of big data technologies has transformed the way investment decisions are made. Predictive analytics, which uses advanced data mining, machine learning, and statistical techniques to analyze large volumes of data, provides investors with valuable insights and forecasts. This research aims to explore how predictive analytics based on big data can improve the accuracy and efficiency of investment decisions, reduce risks, and increase returns.

Research Problem:

Despite the availability of vast amounts of financial data, many investors still rely on traditional methods or intuition, which can lead to suboptimal investment choices. The challenge lies in effectively harnessing big data through predictive analytics to support more informed and data-driven investment decision-making processes.

Objectives:

To review current predictive analytics techniques applied to big data in the investment field.

To analyze how predictive models impact investment decision accuracy and risk management.

To identify the key data sources and variables that influence investment predictions.

To propose a predictive analytics framework that assists investors in making better decisions.

Research Questions:

What are the most effective predictive analytics methods used in investment decision-making?

How does the integration of big data improve predictive performance compared to traditional approaches?

What types of big data (e.g., market data, social media sentiment, economic indicators) contribute most significantly to investment predictions?

What are the practical challenges and limitations of applying predictive analytics in real-world investment scenarios?

Methodology:

This research will use a mixed-method approach, including:

A comprehensive literature review of existing predictive analytics models and big data applications in investment.

Quantitative analysis using historical financial data combined with alternative data sources to build and test predictive models (e.g., machine learning algorithms).

Case studies of investment firms that utilize big data predictive analytics.

Interviews with financial experts and data scientists to gather qualitative insights.

Expected Contributions:

The study aims to contribute to the academic and practical understanding of how big data-driven predictive analytics can transform investment strategies. It will provide a framework for investors to leverage advanced analytics for improved decision-making and risk mitigation.

Research Tools

Questionnaire

A structured questionnaire was developed and distributed through Google Forms to collect quantitative data from the target population. This method was chosen for its accessibility, ease of distribution, and ability to reach a wide audience efficiently.

Keywords:

Big Data, Predictive Analytics, Investment Decision-Making, Machine Learning, Financial Forecasting, Risk Management

References:

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