**Artificial intelligence in Finance: a comprehensive review**

**through bibliometric and content analysis**

(AI) has experienced rapid development and is being used in a wide range of sectors and activities, this paper analyzes papers/material between **1992 and March 2021**.

**Applications in Finance**:

* **Predictive/forecasting Systems**: AI is widely used for forecasting and predicting market trends.
* **Classification and Detection**: It helps in fraud detection and early warning systems.
* **Big Data Analytics / Data mining / Text mining** : AI processes large amounts of unstructured data, aiding in decision-making and risk management.
* **Sentiment Analysis**: AI-driven analysis of investor sentiment has become a tool for better understanding market behaviors.
* **Early warning systems**

Selected articles fall into **ten main research streams**, in which AI is applied to the

**stock market, trading models, volatility forecasting, portfolio management, performance,**

**risk and default evaluation, cryptocurrencies, derivatives, credit risk in banks, investor sentiment analysis and foreign exchange management, respectively.**

**Introduction**

Companies adopting AI technologies sometimes report better performance

The demand for high-skilled employees is expected to increase,

whilst the demand for low-skilled jobs is likely to shrink because of automation;

Financial institutions, which rely heavily on Big Data and process automation

**Benefits:**

* Encourages automation of manufacturing processes - enhances efficiency and productivity.
* Machines are immune to human errors and psychological factors,
* ensures accurate and unbiased predictive analytics and trading strategies.
* fosters business model innovation and radically changes customer relationship,
* promoting customized digital finance, results in better service efficiency and cost-saving
* likely to have substantial implications for financial conduct and prudential supervisors
* potential to help supervisors identify potential violations and help regulators better anticipate the impact of changes in regulation
* complex AI/machine learning algorithms allow Fintech lenders to make fast (almost instantaneous) credit decisions, with benefits for both the lenders and the consumers

**Intelligent devices in Finance Applications:**

* fraud detection
* algorithmic trading and high-frequency trading
* portfolio management
* credit decisions based on credit scoring or credit approval models
* bankruptcy prediction
* risk management
* behavioral analyses through sentiment analysis and regulatory compliance.

This study complements some previous systematic reviews on the topic,

Hentzen et al. (2022b) and (Biju et al. 2020), which differ from our

work in the following main respects:

Hentzen and co-authors’ study focuses on customer facing financial services, whilst the valuable contribution of Biju et al. poses particular attention to relevant technical aspects and the assessment of the effectiveness and the predictive capability of machine learning, AI and deep learning mechanisms within the financial sphere; in doing so, it covers an important issue which,

**Artificial intelligence and its role in the labor market and financial sector itself:**

**US point of view**

Drawing from **labor economics and sociology**,

Analyzes how AI adoption affects

job roles, skills demanded, and employment patterns in the financial industry.

changes in labor markets and employment structure,

Artificial intelligence **uses in finance sector**

managing assets, trading using algorithms, evaluating credit, and using blockchain for finance.

Using AI in **financial companies**

Help do better than their competitors.

work faster and cheaper,

improve the services they offer to customers.

help people who use financial services by giving them better products,

information to make smarter investments,

helping more people access financial services by looking at their credit history.

Small businesses can use a thin file to apply for loans.

**Purpose of the article :**

* determine the role of artificial intelligence in the financial sector
* its impact on future jobs,
* identify the key role of US influence on AI technologies

Resolves common misconception about AI

“Artificial Intelligence would remove the human aspect from the business”.

Artificial Intelligence can automate and improve services delivered to members while improving the bottom line.