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Artificial Intelligence in Economics and Finance: An AI-driven Literature Review

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Abstract

The intersection of artificial intelligence (AI), economics, and finance has seen a rapid expansion in academic research in recent years. This surge is largely driven by the emergence of large language models (LLMs) and generative AI (GenAI), which are reshaping how scholars collect, process, and analyze unstructured data. A key development in this context is the growing use of ”text as data” methods. AI-based tools are now routinely applied to parse and interpret financial reports, social media content, and academic texts to uncover patterns and insights at scale. This paper presents an AI-assisted literature review using Latent Dirichlet Allocation (LDA), an unsupervised topic modeling technique, to identify and classify the major research areas where AI intersects with economics and finance. We uncover ten distinct thematic clusters, including work on Environmental, Social, and Governance (ESG) issues, credit risk, energy economics, digital transformation, and data security. Although the benefits of AI applications are widely recognized, we also identify key limitations, particularly regarding model interpretability and transparency. Finally, the paper concludes pointing towards future research opportunities exploring the environmental footprint of AI itself, underlining the importance of responsible AI development.

JEL Classification: C88; G17; O33; Q55

1. Introduction

Artificial intelligence (AI) has rapidly become a central topic in economics and finance. Breakthroughs in large language models (LLMs) and generative AI (GenAI) have significantly expanded the types of data that researchers can analyze and the methods available to do so. Since the public release of ChatGPT in 2022, followed by tools like Gemini and Claude, AI has increasingly been used to automate, scale, and refine empirical analysis. A particularly important trend is the use of unstructured textual sources, often referred to as ”text as data” (Gentzkow et al. 2019). These methods have enabled large-scale extraction of insights from documents such as regulatory filings, financial statements, and academic articles.

The rapid uptake of AI also brings new regulatory and ethical considerations. Regulations like the General Data Protection Regulation (GDPR), the AI Act of the European Union, and the updated Consumer Credit Directive define clear constraints for the use of AI, especially in high-risk domains such as credit scoring. The Digital Operational Resilience Act (DORA) also emphasizes the need for secure and resilient digital infrastructures—an issue mirrored in the literature on AI applications in finance and governance (Musch et al. 2023).

This paper offers an AI-supported literature review focused on identifying key themes in this fast-evolving research space. Using Latent Dirichlet Allocation (LDA), an unsupervised machine learning technique, we analyze the abstracts of over 19,000 publications to identify ten coherent research clusters. These include applications of AI in ESG, credit risk assessment, financial forecasting, energy management, digitalization, and data governance, which is aligned with previous revisions of the literature, such as Ardia et al. (2024), Alonso-Robisco et al. (2025), Ghoddusi et al. (2019) or Bhatore et al. (2020).

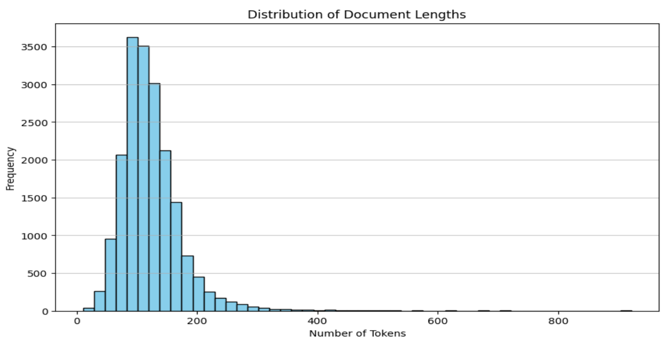
Our contribution is twofold. First, we map the thematic evolution of AI applications in economics and finance over time. Second, we analyze the interplay and boundaries between these research areas, identifying synergies as well as methodological and regulatory challenges. The structure of the paper is as follows: Section 2 presents the dataset; Section 3 outlines the methodology; Section 4 describe the findings; and Section 5 offers conclusions and avenues for further research.

2. Dataset

To construct a focused corpus at the intersection of AI and economics or finance, we conducted a structured query, as of 28th May,2025 using the Scopus database. The search targeted core AI-related terms, such as Generative AI, Artificial Intelligence, Machine Learning, Natural Language Processing, Large Language Models (LLMs), and Agent-based AI, in combination with economic and financial terms including Finance, Economics, Financial Planning, and 3 Investment.[1]The search was restricted to five subject areas: Decision Sciences; Business, Management, and Accounting; Economics, Econometrics, and Finance; Social Sciences; and Energy.

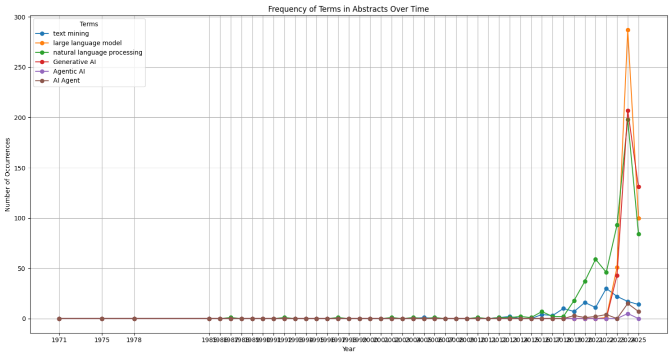
This query initially retrieved 19,185 documents, all in english. After removing entries with missing or empty abstracts, we retained a final working corpus of 19,095 documents. These abstracts serve as the basis for the natural language processing (NLP) analysis. The total vocabulary consists of 37,975 unique tokens. The average abstract length is 122.53 tokens, confirming the moderate length typical of structured academic summaries. As shown in Figure 1, most abstracts fall between 80 and 160 tokens in length, with a sharp drop beyond that range. This makes the corpus well-suited for unsupervised topic modeling, as algorithms like Latent Dirichlet Allocation (LDA) perform best on medium-length textual data.

Figure 1. Distribution of document lengths in the corpus (number of tokens per abstract).



To complement this quantitative overview, we also analyzed the temporal frequency of selected AI-related keywords. Figure 2 shows the yearly appearance of terms such as “text mining,” “natural language processing,” “large language model,” “Generative AI,” “Agentic AI,” and “AI Agent.” These patterns provide insight into how different AI paradigms have influenced academic publishing over time within the economics and finance literature.

Figure 2. Yearly frequency of selected AI-related terms in abstracts.



The figure illustrates that “natural language processing” was the first term to gain momentum, with steady growth starting around 2015. Shortly after, mentions of “text mining” increased as well, reflecting the rise of data-driven research. By 2021, the term “large language model” began to dominate, peaking in 2023 with the widespread release of models such as ChatGPT. More recently, “Generative AI” has become the most frequently used keyword, surpassing both LLM and NLP in 2024. In contrast, terms like “Agentic AI” and “AI Agent” have seen limited adoption. These trends illustrate not only the increase in publication volume, but also the shifting conceptual focus in the AI literature within economics and finance.

[1] Search query: (TITLE-ABS-KEY((GenAI) OR (”Generative AI”) OR (”Agent* AI”) OR (”Artificial Intelligence”) OR (”Machine learning”) OR (”Natural Language Processing”) OR (”Large Language Model*”) OR (LLM*)) AND TITLE-ABS-KEY((”Financial management”) OR (Finance) OR (Economics) OR (”Financial planning”) OR (Financial) OR (Investment*))) AND (LIMIT-TO (SUBJAREA,”DECI”) OR LIMIT-TO (SUBJAREA,”BUSI”) OR LIMIT-TO (SUBJAREA,”ECON”) OR LIMIT-TO (SUBJAREA,”SOCI”) OR LIMITTO (SUBJAREA,”ENER”))

3. Topic Modeling with Latent Dirichlet Allocation

Latent Dirichlet Allocation (LDA) is a generative probabilistic model commonly used for topic modeling in natural language processing. It assumes that each document is a mixture of latent topics and that each topic is characterized by a distribution over words. Originally introduced by Blei, Ng, and Jordan (2003), LDA has become a standard tool for discovering thematic structure in large text corpora.

The generative process assumed by LDA is as follows. Given a corpus of M documents, where each document d consists of N_d words:

1. Each document has a distribution over topics: $\theta_d \sim \text{Dirichlet}(\alpha)$;
2. Each topic has a distribution over words: $\phi_k \sim \text{Dirichlet}(\beta)$;
3. For each word w_{dn} in document d:
   - A topic z_{dn} is sampled from θ_d;
   - A word w_{dn} is then drawn from $\phi_{z_{dn}}$.

The goal of inference is to estimate the posterior distributions of the latent variables (namely, the document) topic distributions θ, the topic-word distributions ϕ, and the topic assignment for each word z, based on the observed words w.

For this study, LDA was implemented using the gensim library in Python, applied to the 19,095-document corpus described earlier. The preprocessing pipeline included lowercasing, stopword removal, tokenization, and lemmatization. After constructing the dictionary and corpus, we trained multiple LDA models varying the number of topics between 5 and 20.

To evaluate model quality, we used two common metrics: perplexity and coherence.

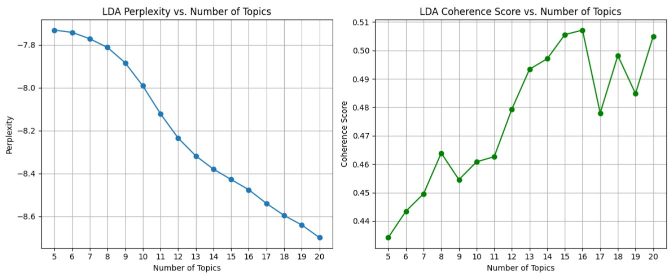
Perplexity measures the model's ability to generalize to unseen data and is defined as:

$$\text{Perplexity} = \exp\left(-\frac{\sum_{d=1}^{M} \log p(w_d)}{\sum_{d=1}^{M} N_d}\right)$$

Lower perplexity values indicate better predictive performance, although this metric is not always aligned with human interpretability. Coherence, in contrast, captures the semantic relatedness of the top words in each topic. It reflects the degree to which topic words tend to co-occur in a reference corpus and is often a more reliable proxy for meaningful topic structure.

Figure 3 shows the evolution of both metrics across different topic counts. While perplexity improves steadily with more topics, coherence stabilizes and becomes erratic beyond 10 topics. From a human labeling standpoint, models with more than 10 topics tended to produce overlapping and harder-to-distinguish clusters. Based on this combined empirical and qualitative assessment, we selected a 10-topic model for further analysis.

Figure 3. Perplexity (left) and Coherence Score (right) for LDA models with varying numbers of topics



4. Topic Modeling Results

After selecting the optimal 10-topic model, the next step involved interpreting and labeling the topics identified through LDA. Each topic consists of a distribution over terms, while each document is represented as a mixture of topics. To facilitate interpretation, we examined both the topic-word probability distributions and the topic assignments per document.

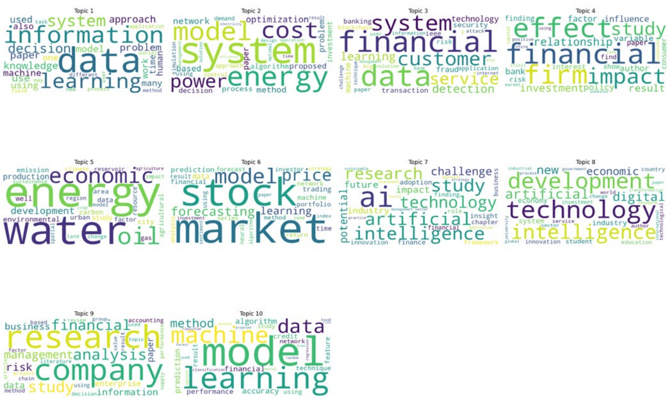
In some cases, meaningful labels can be inferred directly from the list of high-probability tokens. For example, consider Topic 6:

0.034*"market" + 0.029*"stock" + 0.028*"model" + 0.025*"price" + 0.014*"forecasting" + 0.014*"learning" + 0.013*"prediction" + 0.012*"data" + 0.011*"trading" + 0.011*"machine"

Tokens such as market, stock, price, and forecasting clearly suggest a focus on financial forecasting and trading models. In such cases, the coherence of top terms offers sufficient guidance for human interpretation.

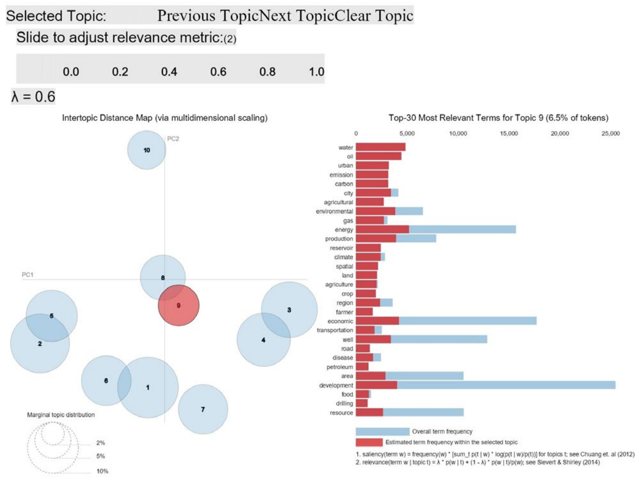
To support this labeling process further, in Figure 4 we generated wordclouds based on the top-weighted terms in each topic. These visualizations provide a quick overview of prominent terms and help reinforce or refine topic labels. For example, in the wordcloud for Topic 6, the concentration of financial keywords confirms its identification as "Financial Forecasting."

Figure 4. Wordcloud summarizing dominant tokens in all 10 topics



However, not all topics are equally clear. In several cases, overlapping or generic terms made interpretation more difficult. To address this, we used interactive visualizations with pyLDAvis (Sievert and Shirley 2014), which display intertopic distances and term relevance under a tunable λ parameter. Setting $\lambda = 0.6$ (a common recommendation) provides a balance between term frequency within a topic and exclusivity across topics.

Figure 5. pyLDAvis visualization of Topic 9 (AI for Environment) using relevance parameter $\lambda = 0.6$



As shown in Figure 5, Topic 9 includes terms such as water, urban, climate, agriculture, and environmental, which point toward themes such as agricultural risk, water management, and land use. Additional terms like energy and resource indicate a strong connection to environmental systems optimization through AI. Based on these insights, we labeled this topic "AI for Environment".

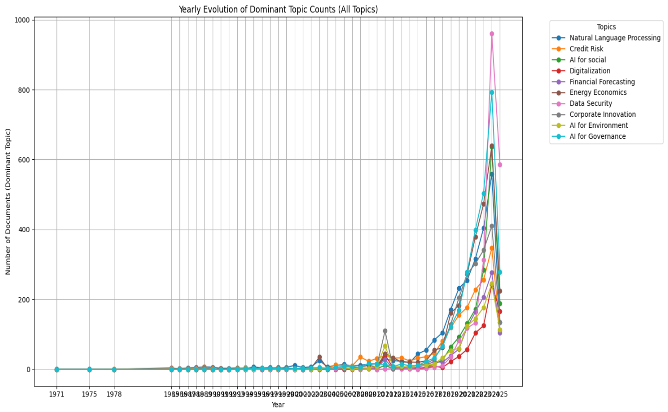
Nevertheless, we found some degree of thematic overlap. For instance, the topic labeled "Energy Economics" also involves keywords like energy, production, and system. While its focus is more technical (e.g.: on forecasting renewable supply or optimizing energy storage) it shares terminology with environmental AI. This suggests that topic boundaries are sometimes fluid, and that some research papers straddle multiple thematic clusters.

To enhance labeling accuracy, we identified the dominant topic for each document and selected the 30 most representative documents per topic for manual review. This process led to the following topic labels:

1. Natural Language Processing
2. Credit Risk
3. AI for Social
4. Digitalization
5. Financial Forecasting
6. Energy Economics
7. Data Security
8. Corpotate Innovation
9. AI for Environment
10. AI for Governance

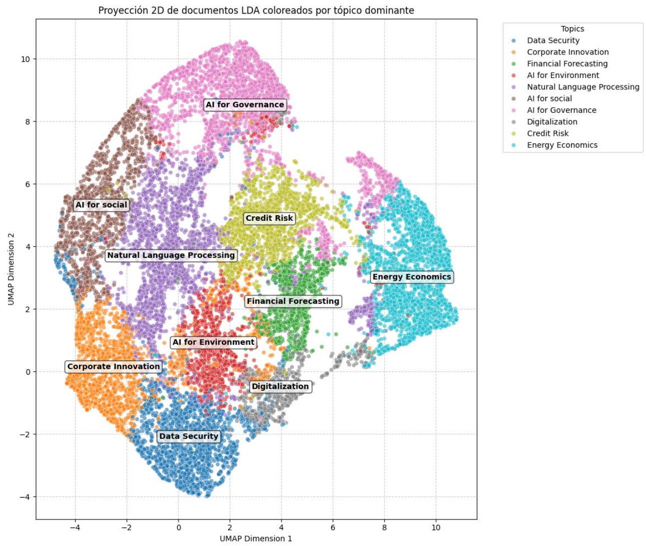
We also examined how topic prevalence changed over time. Figure 6 shows the annual frequency of documents dominated by each topic. Although each document is a mixture of topics, this approach offers a useful approximation of thematic evolution. Notably, the clusters related to Data Security, AI for Governance (e.g.: processing of corporate filings to measure corporate events or CEO performance), and Energy Economics have grown significantly in recent years.

Figure 6. Temporal evolution of topic prevalence (based on dominant topic per document



Finally, to explore topic interaction and overlap, we used projected document-topic vectors into a two-dimensional space. Figure 7 shows the resulting clusters, with documents colored by their dominant topic. Some clusters, like Energy Economics and Data Security, are tightly grouped. Others, such as AI for Social, appear more dispersed and interwoven with adjacent themes, reflecting interdisciplinary overlap.

Figure 7. UMAP projection of documents colored by dominant topic



4.1 Synthesis of Thematic Contributions

The reviewed literature demonstrates the broad and growing role of artificial intelligence (AI) in economics and finance. Drawing on the results of the topic modeling exercise and manual review of representative documents in each cluster, we identify common themes, methodological trends, and inter-topic relationships across the ten topics identified.

A first prominent theme is the application of AI to environmental and energy-related challenges (a result which is aligned with previous revisions of the literature on AI in climate finance, such as, Alonso-Robisco et al. (2025)). Papers in the clusters labeled AI for Environment and Energy Economics frequently use ensemble machine learning methods—such as random forests, support vector machines, and boosting algorithms—to assess environmental risk, forecast renewable energy supply, or improve agricultural planning (Al-Raeei 2024; Erekath et al. 2024; Cheng 2023; Gharedaghy and Ghasemzadeh 2024; Patoucha and Gareiou 2024; Peng et al. 2024; Bastida et al. 2024; Shaheen et al. 2022; Ravindra Babu et al. 2024; Caballero Rodríguez and Camacho Mora 2023). These studies often integrate AI models with sensor data or Internet of Things (IoT) infrastructure, suggesting a convergence between digital tools and physical systems.

Another central area involves financial forecasting and credit risk assessment. These clusters are characterized by the use of time-series and classification models including LSTM, NARX, and XGBoost (Balijepalli and Thangaraj 2024; Faridi et al. 2023; Elsegai, El-Metwally, and Almongy 2025; Ben Yaala and Henchiri 2024; Habbab, Kampouridis, and Papastylianou 2025; W. Zhang et al. 2023). Techniques such as stacked ensembles, SMOTE, and hyperparameter optimization are often applied to increase prediction accuracy. Many of these studies also acknowledge challenges related to interpretability and regulatory compliance in financial domains.

The importance of model explainability emerges strongly in the AI for Governance cluster, especially in the context of fraud detection, ESG analysis, and corporate financial performance (Z. Zhang, Wang, and Cai 2025; Thompson, Buertey, and Kim 2025; Suárez Giri and Sánchez Chaparro 2024; Xu, Jayne, and Chang 2024). Here, interpretable models such as SHAP (Lundberg and Lee 2017) are preferred due to their ability to justify predictions and support regulatory scrutiny. Meanwhile, the AI for Social cluster highlights societal implications of AI adoption in education, inclusion, and sustainability, using diverse methods such as bibliometrics, co-word analysis, and structural equation modeling (Ayyash and Salah 2025; Secinaro et al. 2025; Barari and Sajadi 2024).

A further group of studies focuses on innovation and digital transformation. These are represented in the clusters Corporate Innovation, Digitalization, and Data Security, where AI is used to design flexible infrastructures, respond to crises, or personalize digital services (Kureljusic and Karger 2024; Kamimura, Pinto, and Nagano 2023; Gigante and Zago 2023; Kabachenko et al. 2023; Liu and Lin 2021; Loseva, Munerman, and Fedotova 2024; Goi et al. 2023; Yousfi, Din, and Omar 2021; Radvilė and Urbonas 2025; Perez-Gama, Vega-Vega, and Neira-Aponte 2018; Bazeliuk et al. 2023; Açıkgöz and Acar 2022; Hasan, Hoque, and Le 2023; Khang and Jadhav 2025; Abbas and Hafeez 2021). These studies emphasize AI's role in adapting institutional strategies and enhancing operational resilience, especially in post-pandemic contexts.

Finally, several contributions belong to the Natural Language Processing cluster. These works apply AI methods to unstructured data such as scientific articles, urban images, or online reviews (Van Houtan et al. 2020; F. Zhang and Liu 2021; Hsu 2018).[2] They use neural networks, lexicon-based sentiment models, and computer vision architectures such as Mask R-CNN or PSPNet to interpret content and support decision-making. These studies demonstrate the potential of AI to analyze multi-modal data sources and uncover insights beyond traditional numeric datasets.

Taken together, the literature reflects a strong preference for machine learning over symbolic AI methods, as well as a growing emphasis on interpretability and responsible use. Many papers explicitly discuss the need to comply with regulatory frameworks such as the EU AI Act or the Digital Operational Resilience Act (DORA) (Musch, Borrelli, and Kerrigan 2023). The integration of AI into economics and finance is thus not only technical, but also institutional, shaping how organizations measure value, assess risk, and implement accountability.

To conclude this section, Table 1 provides a consolidated summary of the ten identified topics. For each topic, we list representative keywords and the most frequently used AI methods, based on the dominant documents reviewed. This synthesis helps compare methodological patterns and application domains across thematic clusters.

[2] Notably. this cluster was labeled as NLP due to the majority of papers using to text as data. However, other types of unstructured data like images are used in work embedded in this cluster.

Table 1: Summary of LDA Topics, Thematic Labels, and Main AI Methods

Topic Label	Representative Tokens	Main AI Methods Used
AI for Environment	energy, water, oil, climate, urban	Random Forest, SVM, MaxEnt, ensemble models
Credit Risk	risk, credit, default, bankruptcy, loan	Gradient Boosting, Logistic Regression, SMOTE, ANN, GANs
AI for Social	sustainability, education, social, platform, inclusion	PLS-SEM, Co-word analysis, Bibliometrics
Digitalization	digital, transformation, technology, platform, pandemic	Cloud-based AI, Blockchain, Strategic Frameworks
Financial Forecasting	market, stock, price, forecasting, trading	LSTM, NARX, Ensemble Models, Genetic Algorithms
Energy Economics	power, storage, load, system, forecasting	RNNs, CSA, Load Forecasting, ML Ensembles
Data Security	privacy, identity, security, data, trust	Blockchain, SSI, AI-augmented risk monitoring
Corporate Innovation	adoption, decision, technology, development	NLP, Sentiment Models, Hybrid Decision Systems
AI for Governance	fraud, productivity, governance, CSR, ESG	XGBoost, SHAP, Granger Causality, Panel Estimations
Natural Language Processing	text, language, sentiment, document, extraction	NLP Lexicons, Neural Networks, Mask R-CNN

To further support research prioritization, we propose a qualitative matrix positioning each topic according to its estimated impact and the implementation effort required. While topics such as credit risk and energy economics combine high impact with significant methodological demands, others, such as NLP or corporate innovation, offer accessible entry points with more modest potential. Table 2 presents this synthesis.

Table 2: Impact vs. Implementation Effort Matrix for AI Topics in Economics and Finance

Topic	Impact	Implementation Effort
Credit Risk	High	Medium
Financial Forecasting	High	High
Energy Economics	High	High
AI for Environment	High	Medium
Digitalization	Medium	Medium
AI for Governance	Medium	High
Data Security	Medium	High
Corporate Innovation	Medium	Low
Natural Language Processing	Low	Low
AI for Social	Low	Medium

5. Conclusions

This study has provided a comprehensive, AI-assisted literature review of artificial intelligence (AI) applications in economics and finance. Using Latent Dirichlet Allocation (LDA) to analyse more than 19,000 abstracts, we identified ten thematic clusters that illustrate the breadth and depth of current research. These clusters include both well-established areas such as credit risk and financial forecasting, and more recent or rapidly evolving domains like digital transformation, energy economics, and data governance.

Credit risk emerges as a mature area of application, where machine learning models such as XGBoost, random forests, and ensemble classifiers are used to predict default, assess creditworthiness, and enhance early warning systems (Beltman et al. 2025; Emmanuel et al. 2024). Research in this area emphasizes predictive accuracy but increasingly integrates concerns around fairness and transparency, given the implications of automated lending decisions.

In energy economics, AI is applied to optimize electricity generation, forecast renewable supply, and manage energy storage systems. Studies rely on deep learning architectures such as LSTM and recurrent neural networks, often combined with scenario-based planning or hybrid modeling techniques (Bastida et al. 2024; Shaheen et al. 2022). This reflects a growing trend toward using AI for complex optimization under uncertainty.

The digitalization cluster captures how AI is transforming institutional processes and infrastructures. Topics range from smart city design and energy management to digital platforms in education and finance (Goi et al. 2023; Yousfi et al. 2021; Perez-Gama et al. 2018). These studies emphasize the role of AI in enabling organizational resilience and improving service delivery, especially in post-pandemic contexts.

Other clusters, such as AI for Governance, Natural Language Processing, Corporate Innovation, and AI for Social, highlight how AI is used to analyze unstructured data, support sustainability assessments, detect fraud, and facil 13 itate financial inclusion. Across domains, we observe a growing reliance on text mining, sentiment analysis, and intepretability methods such as the game theory-based technique known as SHAP (Lundberg and Lee 2017).

Indeed, the literature identifies two key limitations. First, model interpretability remains a persistent challenge, particularly in high-stakes applications where decision transparency is essential. Second, data governance and privacy concerns are increasingly prominent. Regulations such as the General Data Protection Regulation (GDPR), the revised Consumer Credit Directive (CCD), and the European Union's AI Act impose strict requirements on fairness, explainability, and risk classification (Musch et al. 2023). These frameworks are especially relevant for AI systems used in automated credit assessment or personal data processing.

Looking ahead, from this work we identify that future research should continue to examine not only how AI can support economic and financial objectives, but also how it can be made more efficient and sustainable in its own operation. Training and deploying large models remain computationally intensive, with non-negligible carbon and water footprints (Strubell et al. 2019; Luccioni et al. 2022; Li et al. 2023). Recent evidence shows that the operational energy use of large language models (LLMs) is far from negligible: GPT-4o, for instance, consumes around 0.42 Wh per short query, which scales to over 391,000 MWh annually, roughly equivalent to the electricity use of 35,000 U.S. households (Huang et al. 2025). This figure represents only the inference phase and excludes the training footprint. Associated carbon emissions are estimated at 138,000 to 163,000 tons of CO_2 per year (requiring a Chicago-sized Forest to offset) and freshwater use surpasses 1.3 million kiloliters, comparable to the annual drinking needs of 1.2 million people (Jegham et al. 2025).

Beyond single models, the broader trend is troubling. A systematic review of Green AI reports that energy savings of over 50% are achievable through model pruning, quantization, and hardware-aware deployment, yet these strategies remain under-implemented in practice

(Verdecchia et al. 2023). Moreover, the water footprint of AI is gaining attention. Training GPT-3 alone is estimated to have consumed 5.4 million liters of freshwater, and the projected AI-related water withdrawal could reach 6.6 billion cubic meters annually by 2027, more than half the total annual use of the UK (Li et al. 2025).

Addressing these impacts will require advances in energy-efficient algorithms, model compression, and responsible AI infrastructure management. These efforts are essential to ensure that the growing use of AI does not conflict with broader goals around resource sustainability and digital responsibility.

6. Appendix

Figures and Tables

Probabilities of tokens per topic

Tópico 0: 0.013*"data" + 0.008*"information" + 0.008*"learning" + 0.007*"system" + 0.007*"decision" + 0.006*"knowledge" + 0.006*"use" + 0.006*"paper" + 0.006*"problem" + 0.006*"approach"

Tópico 1: 0.031*"system" + 0.015*"energy" + 0.013*"model" + 0.011*"cost" + 0.011*"power" + 0.009*"optimization" + 0.009*"network" + 0.008*"method" + 0.008*"based" + 0.008*"problem"

Tópico 2: 0.031*"financial" + 0.031*"data" + 0.017*"system" + 0.012*"customer" + 0.012*"service" + 0.012*"detection" + 0.012*"learning" + 0.011*"technology" + 0.010*"fraud" + 0.010*"machine"

Tópico 3: 0.018*"financial" + 0.017*"effect" + 0.015*"firm" + 0.011*"impact" + 0.011*"study" + 0.009*"relationship" + 0.009*"investment" + 0.008*"result" + 0.008*"policy" + 0.008*"author"

Tópico 4: 0.011*"energy" + 0.010*"water" + 0.010*"oil" + 0.009*"economic" + 0.009*"development" + 0.008*"production" + 0.008*"environmental" + 0.007*"study" + 0.007*"city" + 0.007*"well"

Tópico 5: 0.034*"market" + 0.029*"stock" + 0.028*"model" + 0.025*"price" + 0.014*"forecasting" + 0.014*"learning" + 0.013*"prediction" + 0.012*"data" + 0.011*"trading" + 0.011*"machine"

Tópico 6: 0.054*"ai" + 0.014*"intelligence" + 0.014*"study" + 0.013*"artificial" + 0.011*"technology" + 0.011*"research" + 0.008*"challenge" + 0.007*"potential" + 0.006*"impact" + 0.006*"future"

Tópico 7: 0.023*"technology" + 0.018*"development" + 0.015*"intelligence" + 0.014*"artificial" + 0.012*"digital" + 0.011*"new" + 0.009*"economic" + 0.009*"industry" + 0.008*"economy" + 0.008*"system"

Tópico 8: 0.021*"research" + 0.019*"company" + 0.019*"study" + 0.019*"analysis" + 0.017*"financial" + 0.017*"management" + 0.015*"risk" + 0.012*"business" + 0.011*"information" + 0.010*"data"

Tópico 9: 0.043*"model" + 0.024*"learning" + 0.021*"machine" + 0.015*"data" + 0.015*"method" + 0.013*"algorithm" + 0.013*"prediction" + 0.013*"accuracy" + 0.013*"financial" + 0.011*"performance"

Topic Visualizations using pyLDAvis

This appendix contains the full set of topic visualizations generated using pyLDAvis, with the relevance metric set to λ = 0.6 as recommended by Sievert and Shirley (2014). Each figure includes the intertopic distance map and the top 30 most relevant terms for the selected topic.

Figure 8. Topic 1: Natural Language Processing

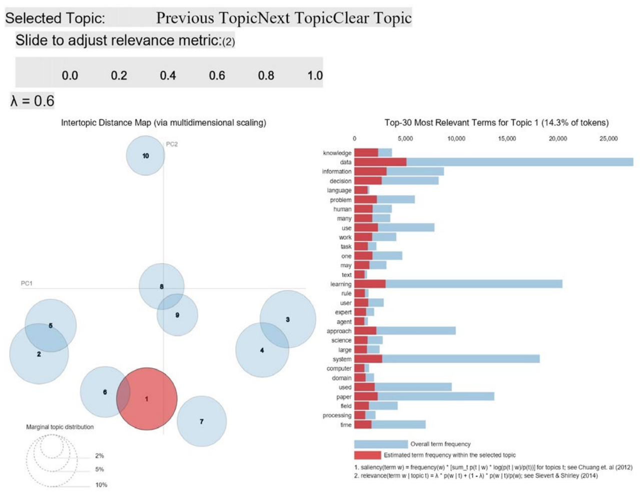


Figure 9. Topic 2: Credit Risk

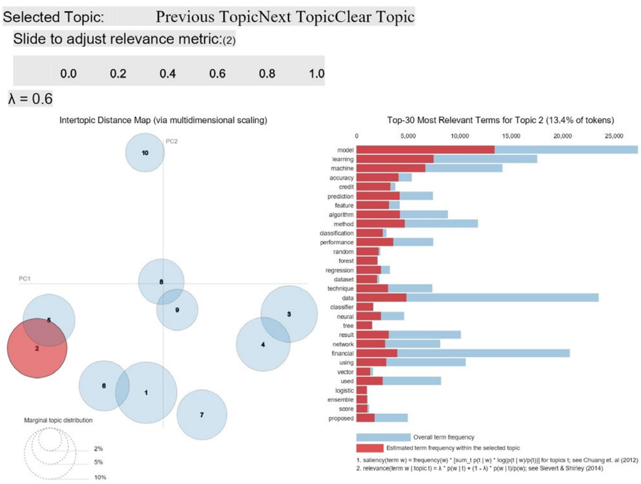


Figure 10. Topic 3: AI for Social

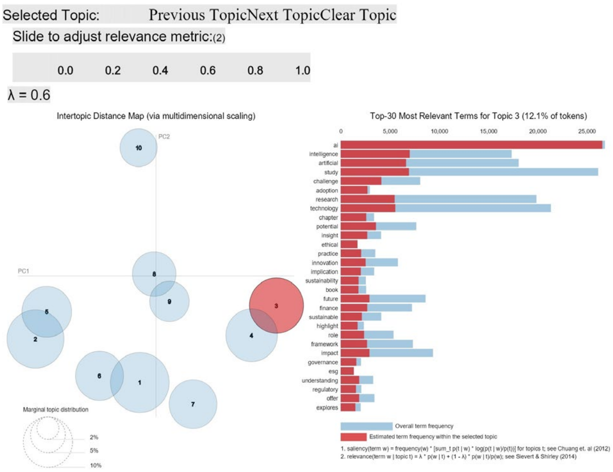


Figure 11. Topic 4: Digitalization

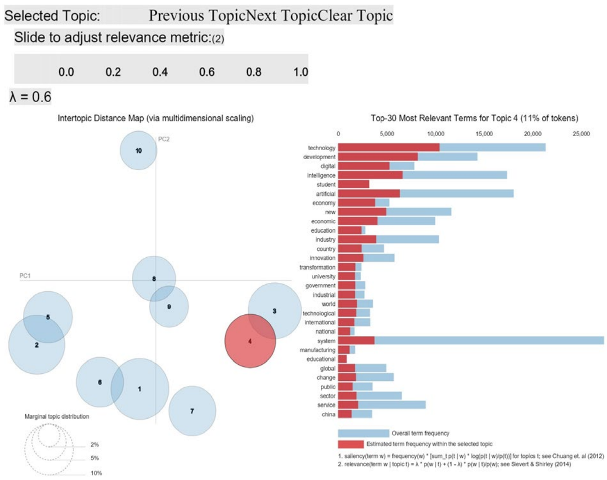


Figure 12. Topic 5: Financial Forecasting

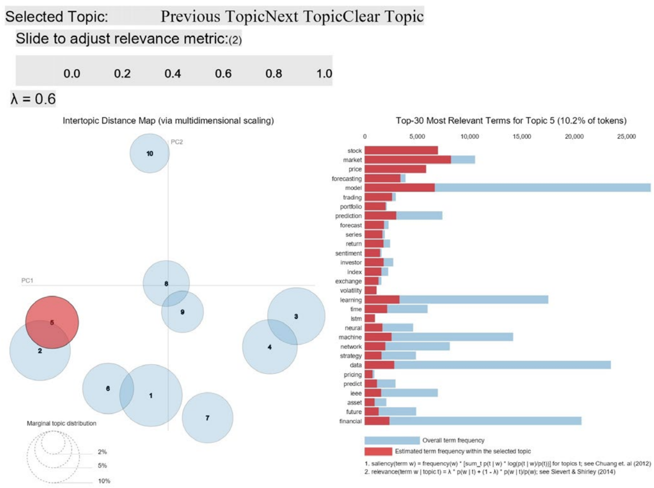


Figure 13. Topic 6: Energy Economics

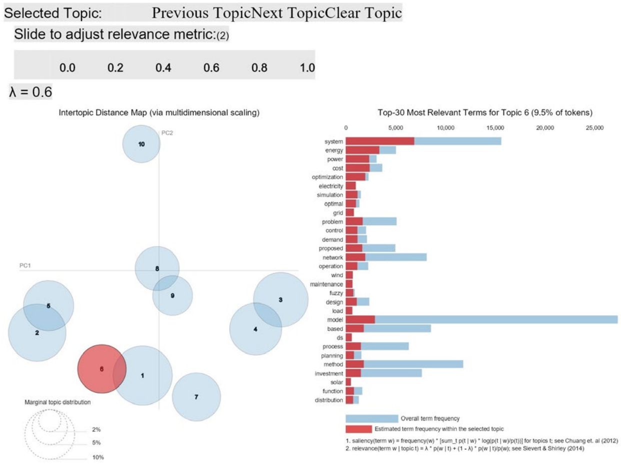


Figure 14. Topic 7: Data Security

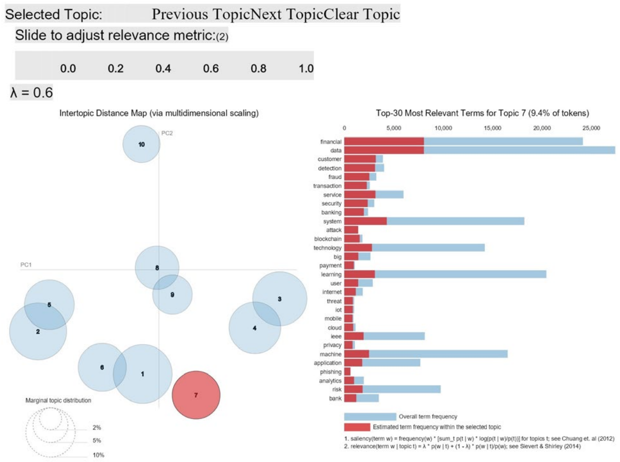


Figure 15. Topic 8: Corporate Innovation

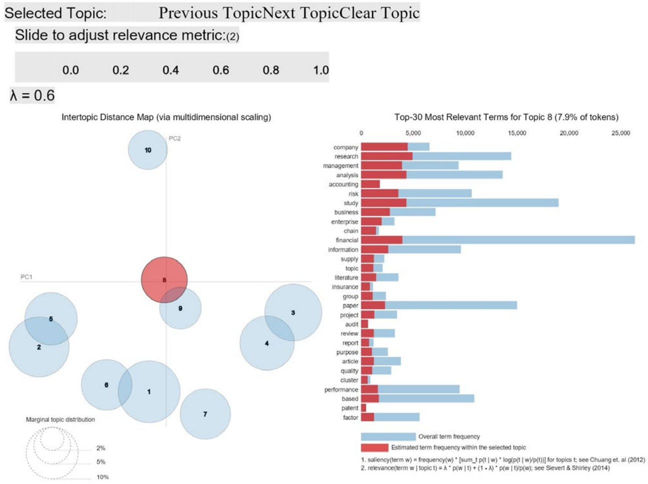


Figure 16. Topic 9: AI for Environment

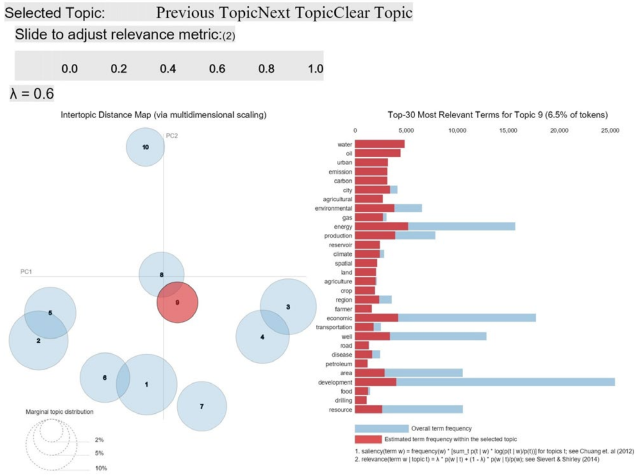
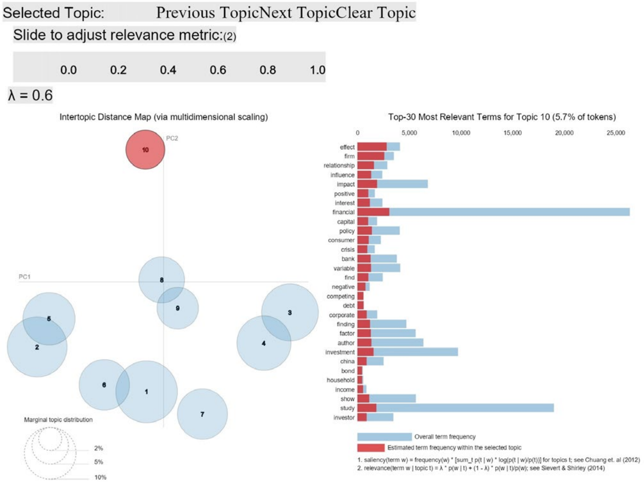


Figure 17. Topic 10: AI for Governance



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8. About the author

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With over a decade of experience in quantitative finance, he has worked in capital markets and treasury at leading financial institutions and public bodies.

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