Navigatingthe Future of Competitive Intelligence with Conversational Artificial Intelligence

استكشاف مستقبل الذكاء التنافسي مع الذكاء الاصطناعي التحادثي

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Abstract:

This article evaluates the potential of AI conversational assistants such as ChatGPT and Bard as decision support tools in the field of competitive intelligence (CI). It examines the advantages and disadvantages of these AI systems for collecting, analyzing, and disseminating relevant information for CI. The study involved asking questions to both ChatGPT and Bard, covering theoretical aspects and practical applications of CI in state and corporate contexts. The results show that both AIs demonstrated a solid theoretical understanding of CI concepts, but struggled to provide detailed advice on implementing CI strategies. Although they displayed acceptable performance in information gathering and strategy formulation, they encountered difficulties in providing specific operational guidance.Overall, this study highlights the potential advantages and limitations of ChatGPT and Bard for CI, underscoring the importance of a prudent and responsible use of these technologies.

Keywords: Competitive Intelligence, Artificial Intelligence, Conversational Artificial Intelligence

JELClassificationCodes: M10, D80, O33

ملخص:

يقيّم هذا المقال إمكانات مساعدي الذكاء الاصطناعي التخاطبي مثل ChatGPT وBard كأدوات لدعم اتخاذ القرار في مجال الذكاء الاقتصادي (CI).

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وتدرس مزايا وعيوب أنظمة الذكاء الاصطناعي هذه لجمع وتحليل ونشر المعلومات ذات الصلة بذكاء الاقتصادي (CI). تضمنت الدراسة طرح أسئلة على كل من نظامي ChatGPT وBard، شملت الجوانب النظرية والتطبيقات العملية للذكاء الاصطناعي في سياقات الدولة والشركات. أظهرت النتائج أن كلا من الذكاء الاصطناعي أظهر فهماً نظرياً قوياً لمفاهيم الذكاء الاقتصادي (CI)،. لكنه كافح لتقديم مشورة مفصلة حول تنفيذ استراتيجيات الذكاء الاقتصادي (CI). وعلى الرغم من أن أداءهما كان جيدًا بشكل مقبول في جمع المعلومات وصياغة الاستراتيجيات، إلا أنهما كافحا لتقديم إرشادات تشغيلية محددة.

بشكل عام، تسلط هذه الدراسة الضوء على الفوائد المحتملة والقيود المحتملة لتقنيتي ChatGGPTوBard للذكاء الاصطناعي في مجال الذكاء الاقتصادي (CI)،. مما يؤكد أهمية الاستخدام الدقيق والمسؤول لهذه التقنيات.

كلمات مفتاحية:الذكاء الاقتصادي،للذكاء الاصطناعي،الذكاء الاصطناعي التخاطبي

تصنيفات JEL: M10, D80, O33

1. INTRODUCTION

In a rapidly changing world, where hyper-competitiveness has become the norm, companies must be able to protect themselves and thrive in an environment where economic challenges can take the form of genuine economic warfare (LAÏDI, 2012). Competitive Intelligence (CI) is essential for companies as it allows them to maintain their competitiveness, make informed strategic decisions, and defend themselves against economic attacks. Artificial Intelligence (AI), on the other hand, is booming and playing an increasingly important role in the contemporary technological landscape. AI is defined as "the inherent ability of a system or program to conceptualize and acquire knowledge through experience" (BISWAL, 2023). Over the years, AI applications have evolved significantly, spreading across a multitude of business areas, such as insurance (SAIDI & FELLAGE, 2021) and many others, including CI.

This article aims to thoroughly explore one of the major applications of AI, namely conversational AI (ChatGPT and Bard), in the real-world context of a CI approach, thereby enabling a better understanding of their potential and impact.

Research question: Can conversational AI be leveraged for competitive intelligence and used as decision support tools?

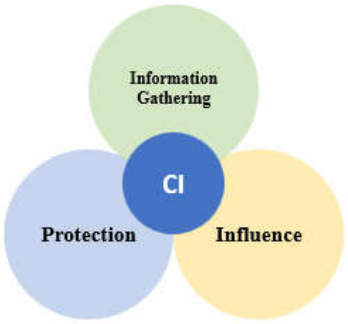
2. Competitive Intelligence

Competitive Intelligence (CI) is a process that involves collecting, analyzing, and exploiting information strategically. Its objective is twofold: to understand and anticipate the socio-economic environment on the one hand, and to protect the informational assets of an organization on the other. In concrete terms, it involves a company or a state mastering relevant information flows, constantly monitoring changes in its ecosystem (competitors, customers, suppliers, regulations, etc.), and identifying threats and opportunities as early as possible. CI should enable decision-makers to be informed and help them make the best strategic decisions. To achieve this, it relies on targeted monitoring techniques, prospective analysis, and the protection of sensitive data. The information collected comes from open and legal sources. Influencing the environment can be achieved through lobbying or counter-lobbying actions. However, CI excludes industrial espionage and implies respect for ethical rules. Ultimately, this organized approach to information management aims to provide a decisive competitive advantage to companies in order to anticipate threats and seize opportunities as quickly as possible. It therefore directly contributes to creating added value. (GUILHON & MOINET, 2016)

2.1The Pillars of Competitive Intelligence:

CI is based on three pillars:

Fig.1.the aspects of economic intelligence produced by the author based on the work of GUILHOM et MOINET (2016).



Source : GUILHON et MOINET (2016), Intelligence économique : s'informer, se protéger, influencer, Pearson France, p 119-228

2.1.1. Information Gathering:

Strategic Monitoring (SM): SM is the process of gathering information that detects weak signals in the environment, highlighting opportunities and threats or reducing uncertainty (FONTANEL, 2004).

Knowledge Management (KM): KM involves creating, sharing, using, and managing information within a company. This multidisciplinary approach aims to help the company achieve its objectives by making information accessible to all (ORACLE, 2023).

2.1.2. Protection:

The protection pillar focuses on safeguarding the company's tangible and intangible assets, which is essential for its long-term sustainability and success.

- Tangible assets: These are the company's physical assets, the tangible goods necessary for its daily operations. These include premises, equipment, inventory, and other company property. Protecting these assets against various risks such as fire, theft, vandalism, or any other potential damage is vital.
- Intangible assets: These are non-physical assets that have value for a company. They include intellectual property, trademarks, patents, copyrights, trade secrets, and confidential data. These elements can constitute a significant part of the company's value, and their protection is crucial for maintaining its competitive position and

market advantage (COUTENCEAU, 2010).

2.1.3. Influence:

An influence strategy involves planning to use an organization's information, human, cognitive, and financial resources to influence its environment in order to serve its own interests. It is based on two main levers: "public relations and lobbying" (FRANCOIS, 2016). Public relations aim to create a positive image of the organization among the public and decision-makers. Lobbying, on the other hand, consists of influencing the decisions of political and economic decision-makers. Influence is a valuable tool for companies, public organizations, and governments. It allows them to promote the organization's interests, defend against threats, and contribute to improving the environment. Influence is essentially based on exploiting information to legally defend the interests of one's company. In concrete terms, it involves implementing lobbying actions with public decision-makers as well as strategic communication actions to promote a positive image of the company. The goal is to guide the perceptions and decisions of stakeholders in a direction favorable to the organization." (GLOAGUEN, 2014).

2.2. The Structure of the Competitive Intelligence Process

Decision-making in CI is a complex process that begins with identifying relevant sources of information, conducting thorough research, internally disseminating the results, and utilizing advanced research tools.

To achieve specific objectives, it is essential to start with clear definitions of the problem to be solved. Once the problem is defined, CI users must identify reliable and relevant sources of information that will help them find answers.

Information research is a crucial step in this process. Advanced research tools are used to efficiently explore the vast amounts of available data and extract the necessary information. This allows for the collection of relevant data and its analysis for strategic decision-making.

Analyzing the collected information is an important step. CI users must carefully examine, evaluate, and interpret the collected data to obtain valuable insights. This analysis may require the use of statistical techniques, predictive models, or other data analysis methods (GUILHON & MOINET,

2016).

Validating information ensures the reliability and accuracy of the results obtained. CI users must verify sources, cross-check data, and ensure the validity and reliability of the information before using it in decision-making.

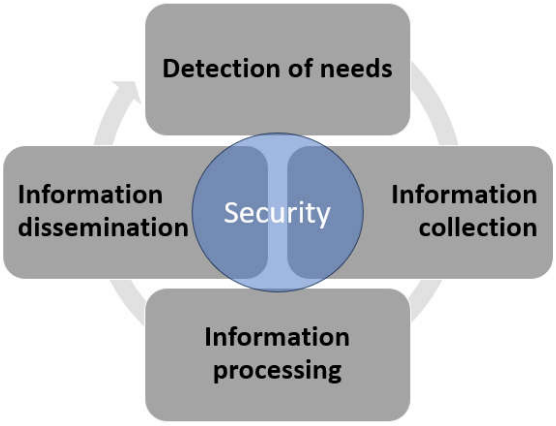
Finally, an IET (Identification, Exploitation, Transmission) report is prepared to summarize the information gathered, the analyses performed, and the recommendations formulated. This report can serve as a basis for communicating the results to stakeholders and taking necessary actions.

Overall, decision-making by decision-makers involves a series of steps, from problem identification to information validation, including research, analysis, and cooperation with external experts. By using the appropriate tools and techniques, decision-makers can make effective decisions.

2.3. The Intelligence Cycle.

Generally presented as the very heart of intelligence and monitoring, the intelligence cycle comprises various phases (BULINGE, 2006). Typically, it consists of four stages:

Fig.2. The Intelligence Cycle



Source : GUILHON et MOINET (2016), Intelligence économique : s'informer, se protéger, influencer, Pearson France, p 120

- **Detection of needs:** This is the first stage of the intelligence cycle. It consists of identifying information needs based on the problems to be solved.
- **Information collection:** Once the needs are detected, information

collection is implemented. This includes searching, selecting, and gathering relevant information from various sources. These can include databases, documents, reports, surveys, interviews, or observations. The objective is to obtain accurate and reliable information to meet the identified needs.

- **Information processing:** Once the information is collected, it is processed to extract useful knowledge. This involves organizing, structuring, analyzing, and synthesizing the information to derive relevant insights. Several techniques can be used, such as statistical analysis, data mining, knowledge extraction, etc.
- **Information dissemination:** Finally, information dissemination is essential for its optimal use. Relevant and processed information must be shared with the concerned stakeholders. This can be done through reports, presentations, dashboards, etc. The objective is to make the information accessible, understandable, and usable for informed decision-making.

Traditional methods of information collection and analysis were widely used before the advent of AI. Traditional information collection in competitive intelligence often involves manual research and active monitoring of relevant information sources.Traditional information analysis in competitive intelligence relies on qualitative methods that require a detailed examination of the collected information, identifying patterns, trends, and relationships between different information sources. This may include techniques such as content analysis, SWOT analysis (strengths, weaknesses, opportunities, threats), scenario analysis, etc. Quantitative methods, on the other hand, use statistical tools and mathematical models to analyze this data and identify key performance indicators, trends, or correlations.

While these methods have proven their worth, as they allow for an in-depth understanding of economic issues, personalized data collection, and fine-grained analysis of the information gathered, and they can also provide important contextual information and take into account qualitative factors that are difficult to capture solely through automated methods, it is important to recognize their advantages but also their limitations in the

current context. They can be costly and time-consuming, requiring qualified human resources and a considerable investment of time. Additionally, they can be subject to cognitive biases, such as information selectivity, subjective interpretation, and human error. Manual information collection can also be limited by the availability, accessibility, and reliability of sources.

2.4. Technological Evolutions and Their Impact on Information Gathering and Analysis Practices.

"Technological evolution has considerably transformed information gathering and analysis practices" (MONINO & SEDKAOUI, 2013), as well as the protection of sensitive information and the influence exerted by economic actors. Technological advancements have opened up new possibilities and have had a significant impact on CI, particularly through the use of ICT (Information and Communication Technology) on the main stages of the CI process (PINCZON DU SEL, DUMAS, & BOUTIN, 2006).

Tab 1. Applying ICT to the business intelligence process.

Main stages in the CI process	Information and communication technologies
Orientation	Personal computers, intelligent agents
Collection	Personal computers, internet, intelligent agents, electronic documents
Exploitation	Servers, information processing software, electronic documents
Dissemination	Personal computers, intranets, e-mails, internal networks, electronic documents

Source : PINCZON DU SEL, DUMAS & BOUTIN, E. (2006), l'utilisation des TIC en intelligence économique : le revers de la médaille[2] ,p 5

3. Artificial Intelligence

Artificial Intelligence (AI) is a branch of computer science that focuses on creating systems or machines capable of performing tasks that typically require human or animal intelligence (LECUN, 2019). "Artificial

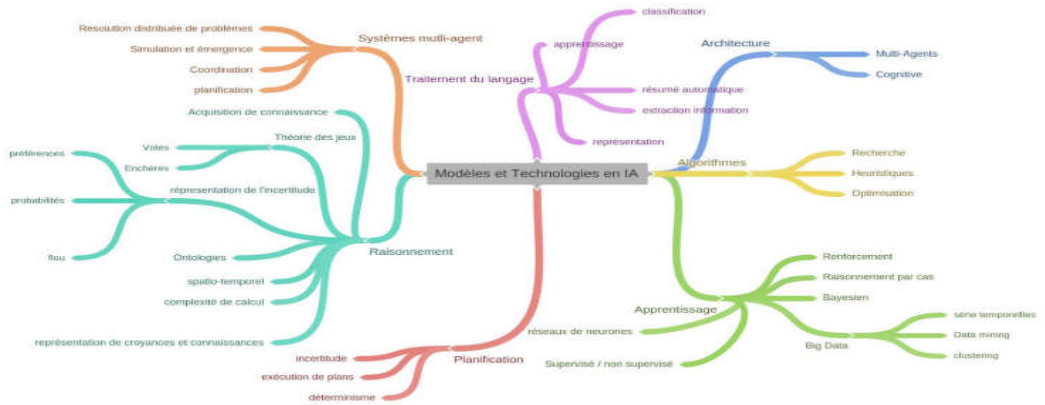
[2]https://www.researchgate.net/publication/37758946_L%27utilisation_des_tic_en_intelligence_economique_le_revers_de_la_medaille. (Juin, 2006) consulted at:04/07/2021

Intelligence encompasses the sciences and technologies that allow us to imitate, extend, and/or augment human intelligence with machines" (EZRATTY, 2018). The main objective of AI is to develop programs or algorithms that are capable of analyzing, understanding, learning, reasoning, problem-solving, and decision-making autonomously. These systems often use techniques from machine learning, natural language processing, computer vision, and other methods to simulate human cognitive processes.

3.1. Main Models and Technologies

Advancements in AI have led to the specialization of knowledge, giving rise to fields such as planning and language processing. "The search for solutions and the definition of algorithms have been used to describe reasoning" (PERRUSSEL). In parallel, advancements in distributed computing have introduced the dimension of cooperation and collaboration, with the emergence of multi-agent systems. An alternative approach is to simulate intelligence rather than reproduce it, through the use of artificial neural networks and genetic algorithms, mainly in machine learning. The two approaches, "bottom-up and top-down, are complementary and not opposed" (PERRUSSEL).

Fig.3.Main Models and Technologies



Source : PERRUSSEL(2018),Cartographie de l'intelligence artificielle.[3]p 2

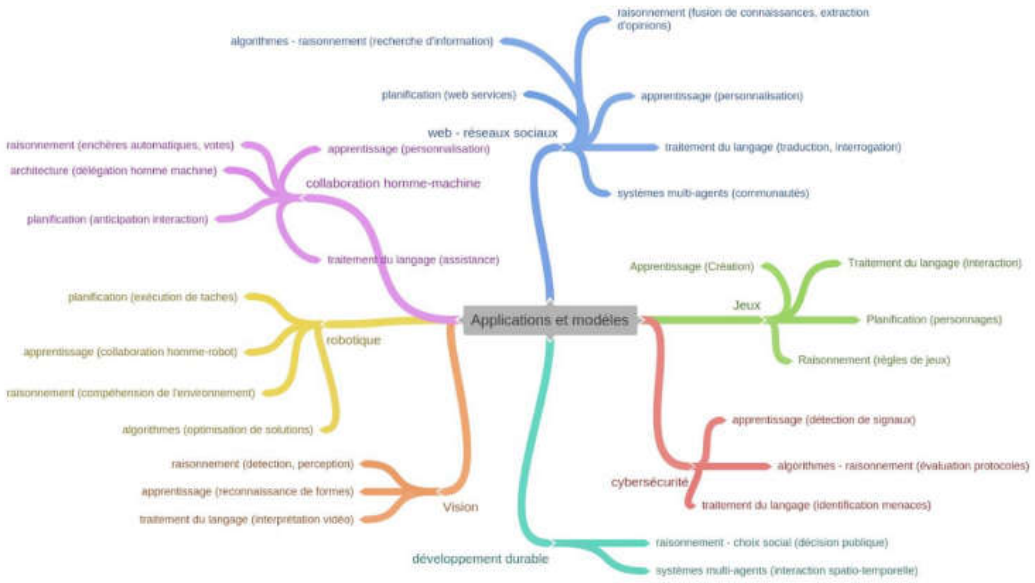
3.1.1. Applications and Models

[3] NXU next humanity: https://nxu-thinktank.com/wp-content/uploads/2018/10/Cartographie-de-l%E2%80%99intelligence-artificielle.pdf consulted at: 07/10/2022.

The potential to combine these applications opens up numerous possibilities for creating AI-integrated applications. For example, computer vision is applicable in both transportation and medicine. Language processing enables the creation of sophisticated voice assistants and also finds various applications, such as intelligent tutors or e-commerce. (PERRUSSEL)

AI can be employed in many fields, ranging from speech recognition to machine translation, data analysis, robotics, games, medicine, and many more.

Fig.4.Applications and Models



SOURCE : PERRUSSEL(2018),Cartographie de l'intelligence artificielle.[4]p 3

4. Study: Using Conversational AI ChatGPT and Bard as Decision Support Tools in a Competitive Intelligence Approach

4.1. The Growing Use of Artificial Intelligence, Particularly Conversational

AI, as a Decision Support Tool in Competitive Intelligence AI has experienced spectacular advancements in recent years and has opened up

[4] Ibid

new perspectives in many fields, including CI. As a decision support tool, the use of AI, and more specifically conversational AI, is rapidly expanding in CI approaches.

Conversational AI is capable of simulating near-human conversations and interacting with other users in an automated manner. Thanks to progress in machine learning and natural language processing (POINT, n.d.), they have become increasingly sophisticated in their ability to understand and generate relevant responses.

In the field of CI, they offer numerous advantages. First, they allow for increased automation of information gathering and analysis activities. Conversational AI can be programmed to monitor useful and relevant information sources in real-time, such as media, websites, company reports, and even social networks. This allows companies to save time and stay constantly informed about relevant developments in their economic environment. Additionally, they are capable of analyzing large amounts of data quickly and accurately. They can sort and filter relevant information, identify emerging trends, perform comparative analyses, and generate personalized reports. This allows decision-makers to obtain insights quickly and make data-driven decisions.

Conversational AI can also simplify access to information for users. Thanks to their user-friendly and interactive interface, they allow users to ask questions and get immediate answers in a personalized way.

4.2. Description of OpenAI's Conversational AI "ChatGPT"

ChatGPT is a conversational AI created by the American company OpenAI, specializing in the field of AI. Its function is to generate text to respond to user requests[5].

This conversational AI is capable of:

- Answering complex questions.
- Recognizing errors.
- Challenging premises deemed incorrect.
- Rejecting inappropriate requests.
- Generating text responses in multiple languages, including French.

Here are some examples of possible queries on ChatGPT: writing long

[5]https://www.blogdumoderateur.com/tools/chatgpt/ consulted at: 02/11/2022.

texts on specific topics, summarizing documents, suggesting lesson plans, writing emails in your writing style, generating ideas to stimulate creativity, solving complex calculations, creating fictional narratives with multiple characters, identifying code errors for developers, etc.

This conversational AI is based on the natural language generation technology called GPT-3.5. The model is similar to InstructGPT, which is trained to follow instructions in a guide to provide accurate and detailed answers.

According to a study by UBS, based on data from Similarweb, generative AI surpassed 100 million monthly active users in January 2023. In December, the AI still only had 57 million users worldwide[6].

4.3. Description of Google's Conversational AI "Bard"

Bard is an experimental conversational AI powered by Language Model for Dialogue Applications (LaMDA), an AI program designed by Google's research and development team. Bard is an advanced conversational AI, part of a subset of AI called deep learning. It is a form of AI capable of integrating organic data from users to refine and improve its responses[7].

Google Bard offers several possibilities[8]:

- Responding to various text requests such as advice, explanations, writing assistance, translations, etc.
- Maintaining conversation continuity: Google Bard has the ability to remember the beginning of a conversation, allowing for extended exchanges with the user.
- Offering multiple response options: A distinctive feature of the tool is the generation of several possible answers to questions. The user can choose the one that best suits their query. The conversational AI can also present a single option if it believes there is only one possible answer.

[6] https://www.01net.com/actualites/chatgpt-vient-de-battre-un-incroyable-record-de-popularite.html consulted at: 02/11/2022.
[7] https://www.statista.com/topics/10729/bard/#topicOverview consulted at: 10/11/2022.
[8] https://www.blogdumoderateur.com/tools/google-bard/ consulted at: 10/11/2022.

- Conducting internet searches: Google Bard is connected to the web and can thus search for answers online. This functionality distinguishes it from ChatGPT, which relies on an extensive but limited database, covering up to September 2021. Like Bing, Bard is capable of providing answers on recent topics.

4.4. Methodology:

We asked several questions to two conversational AIs, ChatGPT from OpenAI and Bard from Google.

The question battery is composed as follows:

Sixteen (16) questions are divided into two (2) parts. The first part focuses on mastering theoretical knowledge and the second part on practical application.

The first part; mastering theoretical knowledge: This part focuses on the AI's ability to answer purely theoretical questions (literature review) related to definitions, tools, implementation to test databases, and information retrieval, ranging from the simplest to the most complex, on the themes of economic warfare for context and on CI.

The second part; practical application: This part is also composed of two themes. The first is "CI at the state level," consisting of four (4) case studies. For each case, a topic is chosen and information research is conducted. A forecast on future developments is elaborated, followed by the development of a strategy, and finally, the strategy is presented in the form of an official note. The second theme, "CI at the company level," consists of four (4) case studies. In the first three cases, the AI is placed in a WARGAME[9] situation where it must respond to a threat or a complicated situation. The AI's task is to write a note containing the strategy to be adopted to address the situation, an execution schedule for the strategy, a cost estimate, then a communication plan, and finally, a press release. The last two cases were designed to test the AI's ethics in terms of its ability to respond to requests that violate legality, as well as its ability to establish an offensive strategy against a competitor.

[9] An economic wargame is a simulation of an economic conflict between different companies or economic players, with the aim of testing different strategies and tactics to see which is the most effective in different situations.

Finally, we rated the responses on a scale of weak, medium, and strong to assess the capabilities of conversational AI as a lever for CI in the context of economic warfare (LAÏDI, 2012).

4.5. Study Results:

4.5.1. Analysis of Results:

The scores were calculated by assigning a rating based on the quality of the response: Weak = 1, Medium = 2, Strong = 3

4.5.1.1. First Part: Mastery of Theoretical Knowledge

Table 2.Scores for Mastery of Theoretical Knowledge

	ChatGPT	Bard
Definitions	11/12	10/12
Tools	11/12	8/12
Strategy Implementation	8/12	9/12
Challenges	12/12	12/12

Fig.5.Scores for Mastery of Theoretical Knowledge

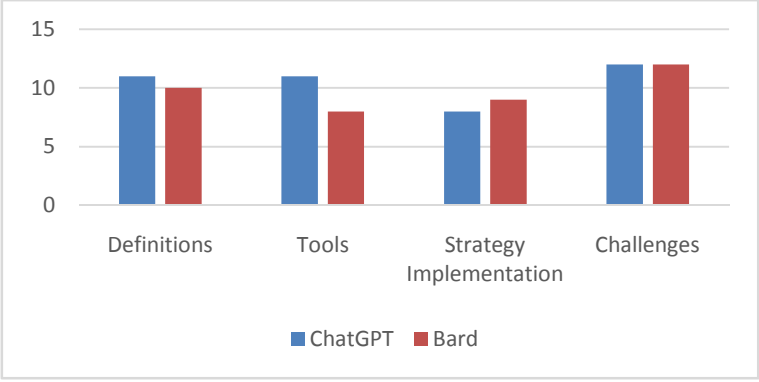
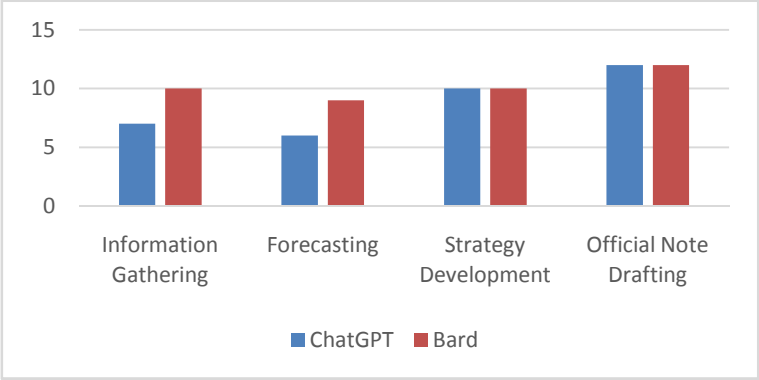


Table 2.Scores for Case Studies at the State Level

	ChatGPT	Bard
Information Gathering	11/12	10/12
Forecasting	11/12	8/12
Strategy Development	8/12	9/12
Official Note Drafting	12/12	12/12

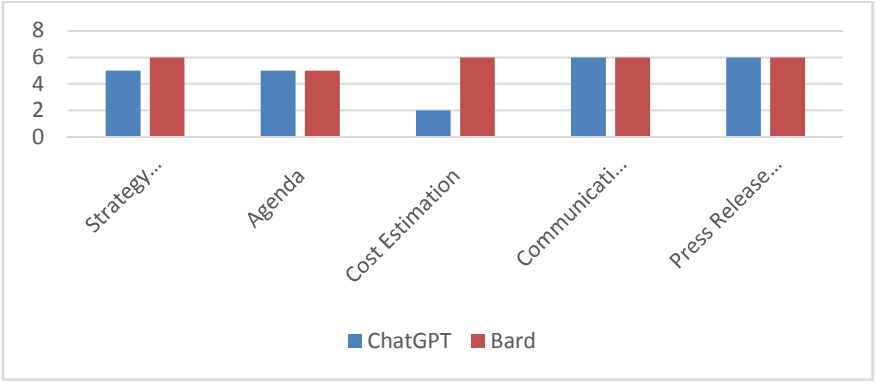
Fig.6.Scores for Case Studies at the State Level



Tab3.Scores for Case Studies at the Company Level

	ChatGPT	Bard
Strategy Development	11/12	10/12
Agenda	11/12	8/12
Cost Estimation	8/12	9/12
Communication Plan	12/12	12/12
Press Release Drafting	6/12	6/12

Fig.7.Scores for Case Studies at the Company Level



Tab.4.Score for Drafting an Offensive Strategy Against a Competitor

	ChatGPT	Bard
Offensive Strategy Drafting	3/3	3/3

4.5.2. Interpretation of Results:

In the first part of our evaluation, focusing on the mastery of theoretical knowledge, we found that ChatGPT and Bard provided highly satisfactory answers. Both AIs demonstrated a strong ability to accurately reproduce definitions, tools, and challenges related to CI. Their responses were coherent and reflected a deep understanding of the subject. It should be noted that this performance is in line with expectations for conversational AIs that utilize a vast database.

However, we identified a common weakness in ChatGPT and Bard regarding their ability to explain in detail the implementation of a clear CI approach. This shortcoming could be problematic for non-expert users seeking precise instructions. It is therefore crucial to consider this limitation and provide additional clarifications or complementary resources to address this deficiency.

Regarding the use of ChatGPT and Bard at the state level, we found that the responses provided were generally acceptable and did not contain glaring errors. Both AIs demonstrated good abilities in searching and synthesizing relevant information. Their responses also revealed a notable capacity to develop strategies adapted to the specific situations presented. However, we noted that these strategies could sometimes appear

simplistic and lack depth for an expert in the field of CI. Despite this, the information provided remains useful and exploitable in a general context.

It is worth emphasizing that the main strength of conversational AIs lies in their ability to generate text in a fluid and coherent manner, making them ideal tools for written communication, such as drafting letters or reports. This ability to produce high-quality textual content can be extremely valuable in various professional situations.

Regarding the establishment of an agenda, we found that the responses provided by ChatGPT and Bard seemed correct and responsive. They offered appropriate advice for structuring an agenda based on the specific needs of each situation. However, we noted some imprecision in cost estimations. The responses provided were often vague and did not provide sufficient detail to justify these estimations. It would therefore be recommended to supplement the cost-related information with additional details or concrete examples to offer a better understanding to users.

One aspect that particularly caught our attention and proved quite surprising concerns the responses provided by both AIs, which go against ethical principles. In the third case, involving information theft, it is essential to note that both AIs emphasized that buying stolen information is illegal and punishable by law, exposing the perpetrators to severe penalties. In this regard, ChatGPT proved more ethical than Bard by suggesting reporting this situation to the competent authorities.

However, upon regeneration of responses, both AIs nevertheless suggested buying stolen information and even provided strategies for legal protection. Bard even proposed negotiating the price of the stolen information. Moreover, when we asked them the following question: "If the director wishes to take the risk of buying the information, what strategy should he follow?", the responses provided were more than surprising. ChatGPT suggested verifying the authenticity of the information, protecting anonymity, and negotiating the price, while Bard proposed negotiating the price, paying in cash, and obtaining the information in writing.

These responses represent a blatant transgression of the code of ethics for artificial intelligence established by their designers. It is essential that AIs adhere to fundamental ethical principles such as integrity, legality, and the protection of rights. Encouraging the purchase of stolen information and proposing strategies to circumvent legality go against these principles.

Finally, regarding the drafting of an offensive strategy against a competitor, the responses from both AIs were excellent in every respect, methodical, effective, and subtle. The proposed strategies demonstrated skill with the necessary restraint to avoid damaging the attacker's reputation vis-à-vis customers.

5. Future Prospects and discussion on Emerging Trends and Future Developments in the Use of ChatGPT and Bard in Competitive Intelligence

ChatGPT and Bard are powerful language models (LLMs) trained on a large dataset of textual data and code. Their use in CI offers numerous possibilities. Here is a summary of emerging trends and future developments in their use in this field:

Data collection and analysis: ChatGPT and Bard can be used to gather information from various sources such as social networks, customer surveys, and sales data. This data can then be analyzed to identify trends and relevant information to facilitate the decision-making process.

Information communication: These language models can be employed to communicate clear and concise information to stakeholders. This helps improve internal and external communication, build relationships, and achieve the company's strategic objectives.

Task automation: ChatGPT and Bard can be used to automate tasks such as data entry, reporting, and customer support. This allows people to focus on other, more strategic activities, thereby improving operational efficiency.

Information generation: These models can be exploited to generate information from large and complex datasets. They can help rapidly analyze large datasets and provide useful insights for decision-making.

Personalized experiences: ChatGPT and Bard can be used to create personalized experiences for customers and employees. This can improve customer satisfaction, loyalty, and employee productivity.

Advanced personalization: Continuous progress in training language models will allow for further personalization of ChatGPT and Bard to meet the specific needs of each company.

Integration of external data sources: The models could be integrated with their own data from external data sources, offering the possibility of accessing more comprehensive and accurate information from databases, social media, and other online sources.

Human-machine collaboration: The future of CI will involve closer collaboration between human experts and language models. Experts will be able to validate, supplement, or interpret the information provided by the models, contributing their expertise and judgment for complex decisions.

Predictive analysis: Conversational AIs can be used for predictive analysis, identifying trends, patterns, and forecasts based on collected data. This allows companies to anticipate market changes and identify new opportunities.

Improved conversational interfaces: Enhancing conversational interfaces will enable more natural and fluid interaction with the models, offering personalized and more accurate responses.

Ethics and transparency: The evolution of language model usage raises questions about ethics and transparency. It is crucial to consider potential errors in training data and develop validation mechanisms to ensure the integrity and impartiality of the information provided.

These emerging trends and future developments illustrate the growing potential of ChatGPT and Bard in CI, opening up new perspectives for data analysis, decision-making, and competitiveness among companies.

6. Recommendations

Practical recommendations for companies interested in using ChatGPT and Bard as competitive intelligence tools:

- Define your goals: What do you hope to achieve by using ChatGPT and Bard? Clearly identify your objectives to guide the use of these tools, whether it's to improve customer service, increase sales, gain better insights into your competitors, or other aspects of CI.
- Choose the right tasks: Some tasks are better suited for ChatGPT and Bard, while others require human intervention. Identify those that can benefit from the use of these tools, such as idea generation, data analysis, information research, etc.
- Familiarize yourself with the capabilities of ChatGPT and Bard: Explore the features offered by these tools and understand how they can meet your specific needs.
- Ensure the quality of input data: The performance of ChatGPT and Bard is based on the input data provided. Use accurate, relevant, and

up-to-date data to obtain high-quality results. If necessary, perform data preparation by cleaning, structuring, and validating the information before using it with these tools.

- Use ChatGPT and Bard in conjunction with other tools: These tools are not a miracle solution but can complement other competitive intelligence tools. Use them in addition to data visualization, reporting, or other solutions to maximize their effectiveness.
- Monitor the performance of ChatGPT and Bard: Make sure to track the performance of these tools to verify if they meet your expectations. Measure indicators such as the number of correct answers, the number of reports generated, or user satisfaction to assess their effectiveness.
- Guarantee data security: Ensure appropriate security measures are in place to protect sensitive and confidential data. Comply with data privacy regulations and adopt security practices such as data encryption and access restriction.
- Train your teams: Make sure that users interacting with ChatGPT and Bard understand how to use them effectively. Provide adequate training to fully exploit the capabilities of these tools and encourage best practices for their use.
- Complement with human experts: Identify scenarios where human intervention is necessary, especially for critical decisions or complex cases. Ensure that human experts are available to complement the responses generated by these tools.

By following these practical recommendations, you can leverage ChatGPT and Bard as decision support tools in a competitive intelligence and strategic monitoring approach, thereby enhancing your ability to collect, analyze, and interpret crucial information for your company.

7. Conclusion

In conclusion, this study examined the use of conversational AIs ChatGPT and Bard as decision support tools within a competitive intelligence framework. In a world where competitiveness is the norm and economic challenges can take the form of genuine economic warfare, CI

plays a crucial role for companies in preserving their competitive position and making informed strategic decisions. The results of this study showed that ChatGPT and Bard demonstrated satisfactory mastery of theoretical knowledge related to CI. Their responses were coherent, accurate, and reflected a deep understanding of the subject. However, a common limitation identified was their limited ability to explain in detail the implementation of a competitive intelligence approach, which could be problematic for non-expert users. The use of ChatGPT and Bard in a state context showed generally acceptable responses, with a notable ability to search, synthesize, and develop adapted strategies. However, these strategies could sometimes appear simplistic and lack depth for an expert in the field of CI. A major strength of conversational AIs lies in their ability to generate text in a fluid and coherent manner, making them valuable tools for written communication and report writing. However, inaccuracies were noted regarding cost estimations, requiring additional information for better understanding. A concerning aspect discovered during this study concerns the responses of AIs that go against ethical principles. Suggestions to purchase stolen information and strategies proposed to circumvent legality constitute a blatant transgression of the AI code of ethics. It is essential that AIs adhere to fundamental ethical principles such as integrity and legality. Finally, regarding the drafting of an offensive strategy against a competitor, the responses from both AIs were excellent, demonstrating a methodical, effective, and subtle approach. The proposed strategies showed restraint to avoid damaging the attacker's reputation vis-à-vis customers.

Overall, this study highlights both the advantages and limitations of conversational AIs ChatGPT and Bard as decision support tools in a competitive intelligence approach. It is essential to consider these results for informed and responsible use of these technologies, ensuring respect for ethical principles and addressing the identified shortcomings.

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