Facultat de Ciències Polítiques i Sociologia

Thesis Dissertation

"AI at the crossroads of diplomacy: legal frameworks, technological tools, and geopolitical implications" – a State-of-the-Art analysis

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INTRODUCTION

The importance of technology in global affairs has grown exponentially over the last decades. Artificial Intelligence (AI) has recently become an area of interest due to its current and future potential to shape the international sphere. This thesis project delves into the question of: How does the integration of AI in diplomacy impacts international relations, and what are the legal, technological, and geopolitical dimensions that shape it? Taking a State-of-the-Art (SotA) approach, the research seeks to summarize how the academic literature frames AI's impacts on diplomacy, describe historical progressions, identify its turning points, and propose a direction for further development on the matter.

Background and significance/justification

The relevance of this research lies in the emerging intersection of AI and Diplomacy. The increasing integration of AI in different aspects of diplomatic practices makes it a phenomenon worth scholarly attention. Moreover, the rapid advancements in AI technologies have the potential to reshape traditional diplomatic methods and strategies.

This research examines English-language academic articles from 2016 to April 2024, a period marked by significant advancements and policy developments at the intersection of AI and diplomacy. Although, the EU's 2016 General Data Protection Regulation (GDPR)[1] did not specifically target AI, it was a critical juncture for data processing related to AI (Höne et al., 2019), justifying the start of this timeframe. The selected years witnessed breakthroughs in AI technologies like machine learning and deep learning, enhancing AI's role not only as a technological tool but also as a pivotal topic in international agenda and a geopolitical factor. The advent of public-access Generative AI tools like OpenAI's ChatGPT, Google's Gemini, and Microsoft's Copilot—deep-learning models that create human-like content—marked a turning point, broadening AI's applications across sectors and heightening concerns over risks like deep fakes threatening democracy (Bano, Chaudhri, and Zowghi, 2023; Martineau, 2023). Multilateral institutions and governments have increasingly explored AI's current and potential benefits and threats to security and peace.

The surge in global policy discussions and initiatives addressing AI's ethical, legal, and normative challenges reflects growing international concern. The United Nations (UN) and the European Union (EU) have spearheaded efforts to create regulatory frameworks and guidelines for responsible AI development and deployment (European Commission, 2018; United Nations General Assembly [UNGA], 2018), fostering global cooperation. Nonetheless, the geopolitical impact of AI's increased data dependency—amidst systemic rivalry among major powers—, risks fueling intense competition rather than cohesive collaboration (Kurbalija, 2024). Strategic competitions and collaborations are now key drivers in shaping diplomatic relations and security strategies, with experts emphasizing the importance of navigating these dynamics while avoiding escalation of global tensions (Imbrie, Daniels, and Toner, 2023).

The importance of this research is further underscored by the effort to synthesize existing academic literature trends on the analysis of the current situation and challenges of AI's relationship with the different dimensions of diplomacy. Drawing inspiration from the classifications of this relationship proposed by the Elcano Royal Institute and DiploFoundation: AI as a topic in the international agenda, AI as a tool for diplomacy, and AI as a geopolitical factor (Bjola, 2019; Höne et al., 2019), this study extends its scope by integrating cross-cutting topics such as ethical considerations, privacy concerns, and human rights implications. By this

[1] (European Commission, 2016)

incorporation, the research seeks to provide a more holistic understanding of the intersection between AI and diplomacy.

Additionally, the research leverages categories derived from a comprehensive literature review—each operationalized by specific sub-topics and challenges—as an analytical framework. This framework is crucial for examining peer-reviewed academic literature to understand how scholars address the intersection of AI and diplomacy. Thus, the study illuminates current academic debates and identifies critical gaps in the research. Ultimately, this enhanced understanding aims to inform policymakers, diplomats, and scholars of the latest trends, challenges, and opportunities in the rapidly evolving field of AI and diplomacy.

The objectives to investigate academic trends regarding AI's role in diplomacy include:

- Analyzing legal frameworks and AI governance challenges.
- Examining AI's function in diplomatic processes and associated opportunities and risks.
- Evaluating AI's geopolitical impact on power dynamics and security strategies.
- Analyzing cross-cutting topics such as ethical considerations, privacy issues, and human rights implications.

The thesis is structured into four sections: Introduction, outlining the study's background; Methodology, detailing the research framework and results; Analysis, examining AI's impact on diplomacy; and Conclusions, offering future research recommendations.

METHODOLOGY

This chapter outlines the research framework and design, aiming to explore the intersection of AI and diplomacy. It details data collection and analysis methods, ensuring rigorous examination and interpretation of findings, divided into a conceptual framework, research procedures, and results presentation.

Conceptual framework

1. **Operational Definitions:**

For this thesis, the definitions of artificial intelligence, diplomacy, and foreign affairs that align closely with the research objectives will be used. Due to limitations in space and the scope of this paper, the debates surrounding the definitions of these concepts will not be examined. Instead, the focus will be on analyzing the relationship between AI and diplomacy, and its impact on international relations, drawing insights from the operational definitions provided by relevant scholars in the field.

- Artificial Intelligence

The debate over AI's definition is significant due to its policy, legal, and operational implications. AI is broadly defined as systems—both software and possibly hardware—crafted by humans to perform actions toward complex goals by perceiving and interpreting data and making decisions to achieve these goals (High-Level Expert Group on Artificial Intelligence, 2019). Specialized or weak AI handles tasks within a specific dataset, providing guidance on predetermined matters, while generalized or strong AI, which currently exists only theoretically, can potentially match human capabilities in problem-solving, creativity, and decision-making under uncertainty (Bjola, 2019; Höne et al., 2019). The latter emphasizes AI's limitations, as it cannot yet replace human discretion except in highly standardized contexts.

- Diplomacy

Diplomacy, as defined by Barston (2019), is: "*the management of relations between states and between states and other actors*" (p.1). From a state perspective, it encompasses advising, shaping, and implementing foreign policy objectives. It serves as the primary means through which states, formal representatives, and other actors articulate, coordinate, and safeguard specific or broader interests. However, the author also notes that diplomacy is not confined to peaceful interactions; it may also operate within the context of armed conflicts or be employed in orchestrating specific acts of violence, such as obtaining overflight clearance for military airstrikes. This blurring of boundaries between diplomatic endeavors and the use of force represents a defining characteristic of modern diplomacy, highlighting diplomatic practices' dynamic and evolving nature.

- Foreign policy

Foreign policy, as discussed in this paper, refers to the diverse strategies, decisions, and actions undertaken by states to further their national interests in the international arena. This includes diplomatic negotiations, economic transactions, military deployments, and cultural engagements aimed at enhancing a state's security, prosperity, and global influence (Hill, 2003; Hudson, 2019; Kaarbo, Lantis, and Beasley, 2013). Hill underscores the pursuit of national interests within international relations, while Kaarbo et al. address the overlap between domestic and international affairs. Hudson expand this view by advocating for integrating multiple analytical levels in Foreign Policy Analysis, emphasizing the significance of both the policymaking process and the outcomes of foreign policy decisions.

2. Analytical categories:

Considering the definitions mentioned above and an extensive revision of academic and non-academic literature, each category of the analytical framework has been operationalized with the main sub-topics and a set of challenges regarding the impact of AI in the international system.

AI AS A TOPIC ON THE POLICY AGENDA

AI introduces shifts in established areas of foreign policy and the international agenda. As its use rises, so does the need to address it at the international level, where diplomatic efforts are crucial (Höne et al., 2019). AI governance refers to the global norms, policies and institutions shaping how AI is built and deployed, as well as the policy and research efforts to make it go well (Dafoe, 2023). Even so, it is a policy area not yet consolidated at the international level, despite the efforts of normative entrepreneurs such as the EU. The general advancement in —unilateral, bilateral, or multilateral— regulations and debates to tackle its risks can be considered as steps towards an international regime of AI governance.

AI AS A TOOL FOR DIPLOMACY

In this dimension, AI is not an end but is rather an instrument for supporting human endeavors, and, in this role, for supporting functions of diplomacy (Bjola, 2019; Höne et al., 2019). The latter refers to information gathering, representation, negotiation, communication, and promotion of friendly relations (United Nations [UN], 1961), as well as consular services and functions. The use of AI data analysis can support diplomats in a range of tasks, such as assistance in decision-making procedures, negotiations, or conflict resolution processes. Nonetheless, the challenges that imply this tool range from technical issues —effective explainable models, good data quality— to more ethical ones —automated biases and transparency.

AI AS A GEOPLITICAL FACTOR

AI is here understood as a factor that shapes the environment in which diplomacy is practiced (Bjola, 2019). And due to its major potential of shifting the power balance, it can also be —or not— the next turn that reshapes the international order (Höne et al., 2019). In a context of geopolitical rivalries exacerbated in the pursuit of AI dominance, states, and other non-state actors seek to "*harness AI's potential for economic advantage, technological supremacy, and influence over global norms and standards*" (Brookings, 2023, para.1). The diplomats will have to navigate between protecting national sovereignty while engaging in meaningful cooperation at the same time (Kurbalija, 2024).

CROSS-CUTTING TOPICS

The inclusion of a dedicated section on cross-cutting topics such as ethical considerations, privacy concerns, and human rights implications in the thesis provides a focused exploration of these topics in AI's relationship with diplomacy. It offers a comprehensive analysis of how academia addresses these dilemmas and challenges arising from the integration of AI technologies into its multipurpose applications. It also allows for a deeper understanding of the values guiding automated decision-making, the risks associated with data privacy, and the potential impact on individual rights.

3. Secondary questions:

A set of secondary questions has been developed to explore effectively how AI integration in diplomacy affects various international relations dimensions. These questions and a detailed outline of sub-topics and challenges found in Appendix 1 guide the analysis of each category within the academic literature. This analytical framework, informed by a thorough review of academic and specialized non-academic sources, ensures a comprehensive examination of the pertinent issues.

- AI as a topic on the agenda:
  - How are existing legal frameworks addressing the use of AI in the diplomatic arena?
  - What are the challenges and gaps in the current regulatory landscape of governing AI?
- AI as a tool for diplomacy:
  - In what ways is AI currently being employed as a tool in diplomatic processes?
  - What are the opportunities and risks associated with integrating this AI tools application?
- AI as a geopolitical factor:
  - How does the rise of AI power dynamics impact the global geopolitical landscape?
  - What are the challenges of AI as a geopolitical factor?
- Cross-cutting topics:
  - What ethical considerations arise at the intersection of AI and diplomacy, and how can they be addressed in policy and practice?
  - What privacy concerns emerge when AI is applied to diplomatic processes, and how can these concerns be mitigated?
  - How do human rights considerations intersect with the use of AI in diplomacy, and what safeguards are necessary to protect these rights?

Research design.

To explore the complex and evolving topic of AI in international relations, a State-of-the-Art review has been employed in this research. SotA reviews —as a type of literature review— are

narrative syntheses that trace the development of academic thought, focusing on contemporary issues to offer a nuanced perspective on emerging trends and methodologies (Barry, Merkebu, and Varpio, 2022; García-Peñalvo, 2022).

The SotA review organizes the literature into a coherent narrative, delineating main themes and challenges and identifying gaps within current research. Thus, it serves as a strategic tool to understand the academic agenda and to find opportunities for further inquiry. However, SotA reviews also have limitations: their focus on recent developments can introduce temporal biases, potentially skewing the understanding of a field's evolution. Moreover, the outcomes may reflect the authors' biases, affecting the portrayal of research priorities (Grant and Booth, 2009). Despite these limitations, the SotA review is integral to this thesis, guiding the exploration of AI's role in international relations.

To delve into each proposed category, certain criteria for exclusion and inclusion of the academic articles have been established:

Table 1: Inclusion and exclusion Criteria[2].

Inclusion Criteria	Exclusion Criteria	Justification
Only peer-reviewed academic articles were included.	All the rest of the documents such as policy papers, think tanks reports, etc., were not studied.	Only peer-review articles were analyzed, to enhance the research's quality
Sources of information were limited to articles from selected Databases (Scopus, Web of Science).	Articles from other academic and nonacademic journals or sources were excluded.	As for the type and extension of this paper, only the most comprehensive and relevant academic sources of information were considered.
Presence of keywords -detailed in the Appendix 2- in the title and/or in the abstract, and in the source keywords list.	Articles with the keywords present only in the body or other fields.	The keywords' presence guarantees that the article is referring to the topic stated in the analytical framework.
Articles only published in the period of 2016- April 2024, including both years.	Articles outside of this timeframe were not considered.	The period selected stands out as a critical juncture in the intersection of AI and diplomacy.

Note: Adapted from "An Energy Culture Maturity Conceptual Framework on Adopting Energy-Efficient Technology Innovations in Buildings" by Soorige, Karunasena, Kulatunga, Mahmood, and De Silva (2022)

Results

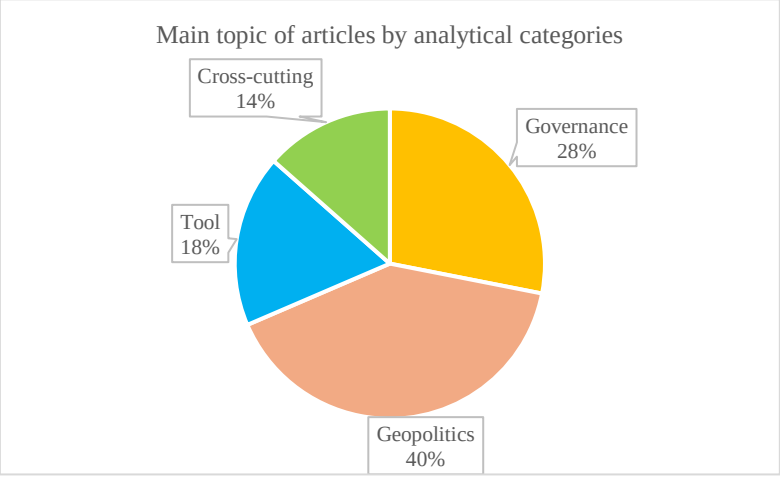
As a first step, applying the selection criteria in the different databases underlined several necessary adjustments. Firstly, including articles published until April 2024 due to its considerable number of publications will enrich the results. Secondly, after thoroughly analyzing each result's abstract of the exported searches, some have been excluded. Despite many of them complying with the core selection criteria, they were not closely related to the purpose and/or topic[3] of this study. Thirdly, with the remaining sample of 89 articles reviewed, a color-based system was used to classify the article's main topic or orientation regarding the four analytical categories outlined previously.

[2] Scopus and Web of Science have traditionally been the two most widely used databases for bibliometric analyses and remain the major and most comprehensive sources of publication metadata and impact indicators (Singh, Singh, Karmakar, Leta, and Mayr, 2021; Pranckutė, 2021). ProQuest was also included at the beginning of the research, nonetheless the searches results were not numerous and repeated in the other databases.

[3] To diplomacy, foreign policy, or international relations in general, but rather to other academic areas such as mathematics, medicine, economics, etc.

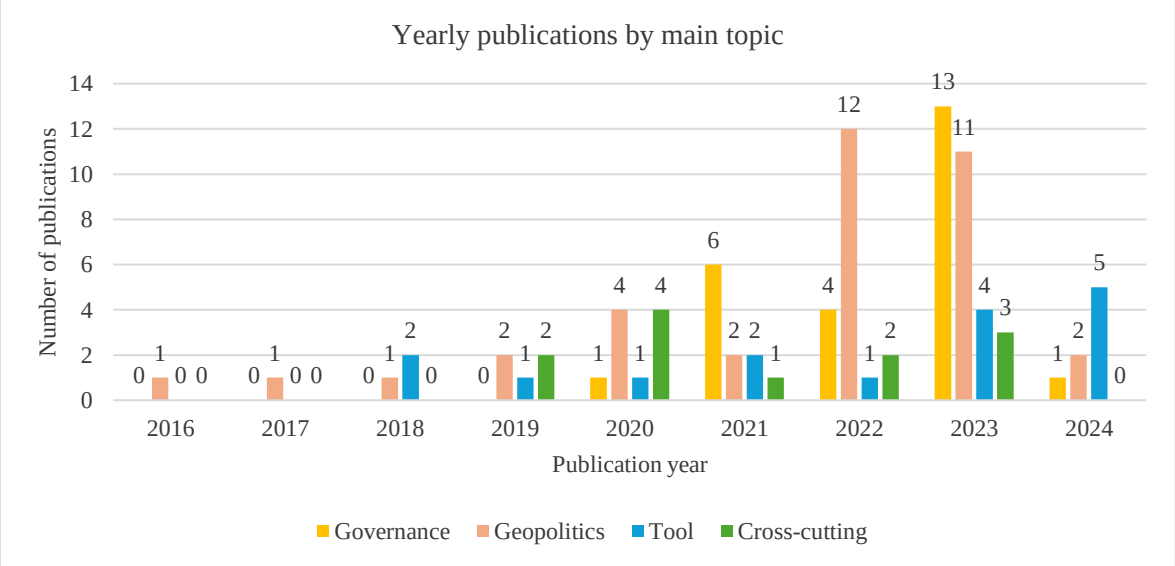
The preliminary analysis identifies "Place Branding and Public Diplomacy" and "Telecommunications Policy" as key journals contributing 7 and 4 articles respectively. Despite their lower H-indexes[4] of 35 and 86 —which quantify the journal's scientific productivity and scientific impact—, these journals are contrasted with "Technological Forecasting and Social Change" and "Sustainability," which boast higher indexes of 179 and 169 but contribute only one article each (SJR, 2024). This suggests that while the study of AI in diplomacy is concentrated in British journals typically focused on business, management, and social sciences, significant insights also emerge from Asian case studies, particularly from Turkey, India, and South Korea, highlighting the regional academic interest in AI after major powers like the US, China, Russia, and the EU. This distribution underscores the global relevance and diverse academic approaches to AI within the field of diplomacy.

Graphic 1: Main topic of articles by analytical categories.



Source: Author's own database with Scopus and WoS data.

Graphic 2: Yearly number of publications by main topic.[5]



Source: Author's own database with Scopus and WoS data.

[4] It indicates the journal number of articles that have received at least *h* citations (SJR, 2024).
[5] The year 2024 was consider only until April.

Frequency Table 1: Articles by main topic

Frequency of articles by main topic

Levels	Frequencies	% of Total	% Accumulated
Cross-cutting	13	14.0 %	14.0 %
Geopolitics	37	39.8 %	53.8 %
Governance	26	28.0 %	81.7 %
Tool	17	18.3 %	100.0 %

Source: Author's own database with Scopus and WoS data.

Frequency Table 2: Articles by year

Frequencies of articles by Year

Levels	Frequencies	% of the Total	% Accumulate
2016	1	1.1 %	1.1 %
2017	1	1.1 %	2.2 %
2018	3	3.4 %	5.6 %
2019	5	5.6 %	11.2 %
2020	10	11.2 %	22.5 %
2021	11	12.4 %	34.8 %
2022	19	21.3 %	56.2 %
2023	31	34.8 %	91.0 %
2024	8	9.0 %	100.0 %

Source: Author's own database with Scopus and WoS data.

Chronologically the topic gained interest in the second half of the studied timeframe —from 2016 to April 2024— and mostly focusing on geopolitical implications and secondly on AI governance. The 2023 has been an effervescent, with a peak in 2023 accounting for 34,8% of the whole academic production—as seen in the Frequency Table 2—, and a high increase in governance-related articles in comparison to previous years—as seen in Graphic 2—. This year coincides with AI relevant events like the UK's AI Safety Summit (UK Government, 2024), or the US's first Enterprise AI Strategy (U.S. Department of State, 2023). Whereas articles addressing AI as a tool for diplomacy accounted for more than half of 2024's production so far. With the advancement of AI technologies and normative productivity in the last couple of years, scholars delve into their different applications and risks for the national and international landscape.

Although not all articles analyzed focus primarily on AI, many discuss it within the broader contexts of *digital diplomacy* or *digital technologies*, consistently addressing the implications of AI's intersection with diplomacy.

ANALYSIS

The need for further clarification arises from the frequent confusion between AI and related technological terms, such as 'algorithmic decision-making' and 'algorithmic bias,' often used interchangeably with AI (Höne et al., 2019). This terminological overlap underscores a lack of consensus on the definition and application of AI, which future regulatory efforts and conceptual

standardization may resolve. The following analysis delves into how this ambiguity affects the interpretation of AI's role in diplomacy.

AI as a topic on the agenda

AI as a topic on the policy agenda is a cross-sectoral issue that affects a variety of areas, thus progress towards the accomplishment of national or international AI's regulation goals represent a diplomatic challenge (Höne et al., 2019). Due to the need to adapt and deal with a wide range of current and new AI-related subjects.

Effective AI governance hinges on a shared, informed, consensual, and yet comprehensive AI conceptualization, which remains elusive. Early movers on the standardization's field might gain a significant competitive advantage (Höne et al., 2019). The absence of a universal conceptualization in the general literature is mirrored in the diverse approaches to AI within the academic articles. Researchers propose viewing AI as 'artificial agents' (Gahnberg, 2021), approaching it as a regulatory challenge beyond mere normative concerns (Tallberg et al., 2023), and advocating for a shift from a 'problem-solving' to a 'problem-finding' governance strategy (Liu and Maas, 2021). This reflects the ongoing debate and complicate the creation of cohesive governance frameworks.

A mix of multilateral cooperation and national interests shapes the current legal frameworks for AI governance. Factors driving states to cooperate include pooling resources for research and development, accessing big data, setting standards, and fostering shared ethical norms (Höne et al., 2019). However, the specific technical landscape and political factors such as inequality, surveillance, and collective action also significantly shape these frameworks (Dafoe, 2018).

The GDPR is predominantly referenced in discussions on national AI governance, illustrating its pivotal role in data regulation, as noted in general literature (Höne et al., 2019). The second most cited article showcases how lessons from other emerging technologies can inform AI governance (Ulnicane, Eke, Knight, Ogoh, and Stahl, 2021). The most common 'national' case studies focus on Chinese, US, and UK regulations, with outliers focusing on South Korea, Turkey, or Ukraine. China's, US's, and the EU's standard-setting strategies are the most studied and compared, rating from a cooperative to more competitive approaches (Qiao-Franco and Bode, 2023; Roberts et al., 2023; von Ingersleben-Seip, 2023).

Regarding international AI governance, the UN and the EU have pioneered significant initiatives, like the UN General Assembly's 2024 resolution for trustworthy AI in sustainable development and the 2023 EU AI Act —marking the first comprehensive AI law (European Parliament, 2023; UNGA, 2024). Historically, the EU focused on military AI applications until 2018, while the UN aimed to bridge the development gap between nations given AI's potential application in the SDG's (Höne et al., 2019).

The scholarly literature largely scrutinizes the EU's regulations as a model for others, highlighting shaping co-evolving factors of EU's AI governance (Justo-Hanani, 2022), including the roles of 'epistemic communities' and other private actors' influences (Palladino, 2021, 2023), and the double way securitization of EU's AI policy (Mügge, 2023). Considering the EU's most recent regulation achievements, the scholars headed the right way by anticipating the influence of EU's entrepreneurship as a normative actor. Although, more in-depth future research is anticipated to explore the broader effects of these policies.

Outside the EU, the academic focus shifts to the UN, which serves as a platform for broader representation in AI discussions. The small quantity of related academic literature did not take the UN as a single case study but as part of comparisons, even suggesting a 'discourse

institutionalization' regarding AI and sustainable development between the UN, the EU, and the World Economic Forum (WEF) (Francisco and Linnér, 2023).

Hybrid governance, involving both state and non-state actors, addresses the complexities of AI development. This governance model necessitates continual assessments of power balances, especially as private tech companies lead innovation efforts (Höne et al., 2019; Scott, Heumann, and Lorenz, 2018; Taeihagh, 2021). Scholars emphasize how private entities influence public and private policy standards, particularly concerning AI's ethical implications (Auld, Casovan, Clarke, and Faveri, 2022). Criticism arises over the substantial roles granted to the private sector and epistemic communities within EU AI regulations, which some argue restricts the scope of ethical considerations (Palladino, 2021, 2023). Conversely, others advocate for a hybrid approach that integrates technical, ethical, and societal factors to ensure AI's trustworthiness and manage associated risks (Sharma, 2023).

Finally, AI governance encounters several challenges, notably the gaps in establishing global and consensual best practice guidelines. The need for flexibility is crucial to enable diverse stakeholders to build this consensus, ensuring applicability across various contexts while aligning with democratic values and human rights (Taeihagh, 2021). The final goal long-term challenge is to design and implement an international AI regime (Schmitt, 2022). Academic articles reveal that the complexities of standard-setting by organizational actors, the issues they prioritize, and the political dynamics involved are critical to understanding AI governance (von Ingersleben-Seip, 2023). Additionally, there is a call for pursuing various governance models simultaneously, tailored to achieve specific policy outcomes (Sepasspour, 2023).

AI as a tool for diplomacy

Interest in AI as a tool for diplomacy has grown significantly since 2018, with a notable surge in academic publications by 2024. Despite this increase, it remains less studied compared to AI's roles in geopolitics or governance. Almost a third of the research involves case studies, particularly focusing on regions such as Southeast Asia and countries including South Korea, Russia, China, and Kenya.

AI is instrumental in a range of diplomatic tasks, that involved managing large volumes of text and data —structured or not (Höne et al., 2019). In negotiation tasks, the highly specialized Cognitive Trade Advisor is a popular example of assistant tool for diplomats, but AI extend its use to real-time monitoring of public sentiment and press coverage (Bano et al, 2023; Cafiero, 2023; Höne et al., 2019). In conflict management, AI can enhance diplomatic entities may improve its preparedness through crisis simulation, real-time analytics, or even human-AI decision framework (Bano et al, 2023; Hsu and Chaudhary, 2023). Monitoring open data for early crisis detection or evaluate satellite images for patterns on refugee movements, are already under use (Höne et al., 2019; McChrystal and Roy, 2023). Nonetheless, the studied articles offer nuanced insights. For negotiations, scholars discuss the digital revolution's impact, which introduces new tactics and challenges related to information security and confidentiality without altering the negotiation's fundamental stages (Lebedeva and Zinovieva, 2023). Notably, the reviewed articles do not specifically address AI's role in crisis management, revealing a gap in current academic discourse on leveraging AI for such diplomatic engagements.

AI's role in decision-making, particularly in military contexts, is well-documented within both academic and general literature. Hoffman and Kim (2023) emphasize that strictly defined mission-specific properties, along with senior decision-makers involvement, are essential to prevent triggering an escalation in conflicts. In foreign policy decision-making, the inherent uncertainties and the need for meticulous scrutiny and accountability mean that effective AI integration requires human oversight to maintain control (Bjola, 2019). Operationally, AI assists

in engaging with audiences by providing precise analyses of impact conditions through network, cluster, and semantic analysis (Bjola, 2019).

The concepts of *digital* or *technology diplomacy,* which encompasses the use of new technologies in diplomatic efforts, often indirectly incorporate discussions on AI as a tool. Additionally, many scholarly articles analyze AI's role in digital diplomacy, evaluating benefits and risks (Bjola, 2024; Di Martino and Ford, 2024; Garcia, 2024; Huang, 2024; Kharitonova, Savina, and Pagnini, 2021; Reshetnikova and Samokhina, 2023; Robertson, 2018; Sevin and Eken, 2024; Zhang, 2023). Specific applications are also proposed, underscoring more targeted uses of AI in diplomacy (Keck, 2018; Levin, 2020; McEvoy, 2019).

The most cited study examines digital diplomacy as a disruptive technology, focusing on how organizations in South Korea adapt to it (Robertson, 2018). Scholars highlights its role in enhancing the operational efficiency of foreign affairs departments, particularly in meeting citizen needs and addressing security threats (Reshetnikova and Samokhina, 2023). Additionally, the need for adaptive strategies in cross-cultural diplomacy is emphasized to ensure relevance across diverse audiences (Oloo, 2023). Conversely, Sevin and Eken (2024) critique the reliance on AI's 'socio-technical imaginaries' in diplomacy, cautioning against viewing AI as a panacea for diplomacy and IR challenges.

Scholars have identified diverse AI applications in foreign policy. These include an AI bot used for data mining in the study of Southeast Asia (Keck, 2018), AI that enhances the role of social scientists in designing and testing geopolitical forecasting tools for more accurate predictions (Lustick, 2022), and AI strategies to evade or detect nation-state internet censorship (Levin, 2020). Another example is an AI neural network model (IPSO-DBN) assessing the effectiveness and safety of Chinese investments under the Belt and Road initiative (Zhang, 2023). Despite controversies, some argue that AI, if is/when ethically robust, could potentially make political decisions more reliably than humans (McEvoy, 2019).

The promising applications of AI also rise considerable challenges to make it trustworthy. Key to effective AI deployment are availability, accessibility, and the quality of data, but progress toward explainable models has been slow, allowing biases to remain hidden. Nevertheless, progress has been slow, and diplomatic personnel must develop skills to leverage AI tools, often requiring collaboration with the private sector (Höne et al., 2019). A high ratio between trade-offs of AI applications would maintain the interest in its integration into diplomatic practices (Bjola, 2019).

The academic literature has focused on the risks of data quality, biased AI systems, and the capacity building of the diplomatic corps. Concerns include AI's potential to operationalize misinformation due to inherent uncertainties in data handling and decision-making processes, as well as the dangers of generative tools like ChatGPT in constructing biased knowledge (Di Martino and Ford, 2024; Huang, 2024). Moreover, there's a warning that digital diplomacy might evolve into a tool for AI-powered information warfare and propaganda (Reshetnikova and Samokhina, 2023).

AI as a geopolitical factor

AI's geopolitical implications has been the main topic of the academic literature, accounting for more than a third of the cross-time production. Contrary to the other dimensions the production has been constant during the whole timeframe, with a peak of 33% in 2022. Case studies mostly focus on the EU, US, China, and Russia, but also India and South Korea where present, reflecting the main players in the race for AI supremacy.

The impact of AI on the international arena is multidimensional. This influences the balance of power through, first, diverse capabilities to access and control AI; second, asymmetric

information, especially regarding the impact of Generative AI (GenAI) if used; third, in operations of influence by using AI to shape public opinion and in psychological operations within the diplomatic sphere (Bano et al., 2023).

Regarding to the power dynamics' impact, in a context of rising systemic competition between the US and China, mostly in the technological dimension, AI developments promise to shift the power balance. However, they are not the only actors that seek a seat in the table of AI superpowers, the EU mainly by normative standards, the UK searching for political debates, as well as emerging powers like India, are pursing different strategies that place them in the negotiation table. Whether collaboration or competition prevails it impacts all the dimensions of the relationship between AI and diplomacy.

As some scholars concluded, AI reduce states' dependence on people to create wealth and to scale military, thus, competition is moving to metaverse (Dear, 2022), and raises the idea of 'technonationalisim' in the search for competitive advantage. The latter, through implementing policies aimed at fostering and safeguarding domestic industries while significantly limiting foreign investments in the technology sector, particularly from competing nations (Devi, Mammen, and Kumar, 2023; Smirnov and Lukyanov, 2019). The second most-cited study highlights the ongoing significance of AI in driving competition for essential raw materials crucial for its applications (Kalantzakos, 2020). It describes the current challenging scenario and raises the focus on the emerging AI superpowers such as India and Russia.

Attention has largely concentrated on warfare and economics, underpinned by the notion that gaining early technological supremacy confers significant advantages. This concern revolves around the potential exacerbation of global instability and the creation of unilateral benefits. The latter is because AI's impact on the economy can lead to both disruption —mostly in the labor market—, and opportunity —as concentration of power (Höne et al., 2019; Scott et al., 2018).

Following the mentioned trend, the most-cited article explores the possible disruptions that new business models empowered by AI can generate in the existing EU's bank-based system (Demertzis, Merler, and Wolff, 2018). Others have addressed AI's economic impact as a boosting economic factor. The former, as some scholars argue, can increase labor productivity and efficiency in the energy sector —i.e. oil and gas industry— as well as promoting green finance and sustainable energy (Dmitrievsky, Eremin, Safarova, and Stolyarov, 2022; Yang, 2023; Zhang, Zhang, and Xiao, 2022).

Security implications of AI for warfare and defense raise especially attention, mostly regarding Automated Weapons System (AWS) and cybersecurity concerns. Not only because it creates new threats between states —like adversarial examples that trick AI into misclassification, or data warfare—, but also because no favorable non-state actors —as terrorist organizations— can be AI-enabled (Briscoe and Fairbanks, 2020; Scott et al., 2018). AI in cybersecurity can swiftly detect, attribute, and respond to cyber threats/attacks safeguarding sensitive diplomatic information (Meleouni and Efthymiou, 2023). The academic literature reviewed was more interested in AWS than in cybersecurity. They proposed an alternative process outside the blocked UN CCW[6] to reach regulation agreements (Bode, Huelss, Nadibaidze, Qiao-Franco, and Watts, 2023), due partly to the US' and China's political discourse considering them as strategic assets (Baechle and Bareis, 2022). These arguments reflect the intricate dynamics of AI among geopolitical, instrumental, and governmental dimensions.

Finally, regarding the security implications of information warfare, examples of its use can be traced to disinformation campaigns seeking to interfere in elections as Russia intended in the UK and US elections. With the emergence of Generative AI and its capacity to generate meticulously

[6] United Nations Convention on Conventional Weapons.

targeted deepfake videos, disinformation campaigns, and large-scale cyberattacks, arises notable risks for national security and public trust in institutions (Brookings, 2023). The studied academic literature raises awareness regarding the AI-targeting of coordinated groups and AI-generated misinformation campaigns to interfere with public opinion in political matters (Hou, Fu, and Lai, 2023; Kreps, McCain, and Brundage, 2022)

On the other hand, the main challenges arising from the shift of power structures are effectively achieving digital sovereignty —mostly difficult for the non-AI powers—, and the risk of increasing protectionism and lack willingness to collaborate (Fleming, 2021; Höne et al., 2019). Additionally, technology dependencies, usually from the least developed AI countries to the AI powers and from privileged position of the private sector are worrying. In this regard, academic analysis includes India's strategy to use AI to counter digital colonization (Dementiev, 2023), and from an EU foreign policy perspective, findings suggest that despite prevalent narratives, the EU's limited AI industry and incoherent defense strategy restrict its ability to lead globally in setting AI standards, relying mainly on its regulatory strengths (Calderaro and Blumfelde, 2022).

Cross-cutting topics

The integration of AI in diplomacy brings complex ethical considerations, privacy concerns, and human rights implications. The scholarly focus on these issues, although limited, highlights emerging challenges and reflects the ongoing need for deeper analysis, as indicated by publications from 2019 to 2023. This includes a case study on the EU's ethical AI governance proposal (Jarrín, 2021).

The ethical implications of AI in diplomacy are critical, particularly in ensuring equitable access for developing nations to overcome the digital divide and enhance global diplomatic equality. This is underscored by existing national and international proposals aimed at establishing robust AI ethics frameworks, which are vital for safe AI advancements (Bano et al., 2023). However, scholarly articles reveal a more critical view, questioning whether these efforts reflect genuine ethical commitment or are merely 'ethics washing' practices that serve more as displays of moral diplomacy, potentially leading to conflicts over moral authority and political control (Vica, Voinea, and Uszkai, 2021).

The inadvertent human rights infringements can mainly be derived from the combination of AI's autonomy, the quality of its training data, and the opaque nature of its algorithms. Data's dual use—enhancing rights and feeding AI models—can lead to discrimination, affecting privacy, employment, liberty, and fair trial rights (Höne et al., 2019). Academic research further emphasizes the serious risks of such opacity, complicating efforts toward fairness and justice, especially in AI-driven content moderation (Gorwa, Binns, and Katzenbach, 2020). Studies also criticize the algorithms' failure to distinguish between sex and gender, which could deepen existing inequalities and reinforce biases (Fosch-Villaronga, Drukarch, Khanna, Verhoef, and Custers, 2022).

Finally, privacy concerns include the management of vast personal data stores from autonomous vehicles to health-monitoring robots, with significant implications for data ownership and legal compliance. Surveillance potential in workplaces and by governments also poses threats to democratic freedoms (Taeihagh, 2021). The scholarly articles note AI's shortcomings in handling private data with human sensitivity and critical judgment (Ahmad, 2020) highlighting privacy challenges like those faced by 'Hyperconnected Diasporas' (Calzada, 2023).

CONCLUSIONS

This thesis critically evaluates the integration of Artificial Intelligence in diplomacy and its broad impacts on international relations, answering the question of: How does the integration of AI in diplomacy impacts international relations, and what are the legal, technological, and geopolitical dimensions that shape it? Guided by a State-of-the-Art approach, the study aims to clarify how academic literature frames AI's impact, trace historical progressions, identify pivotal developments, and propose directions for future scholarly and practical exploration. Nonetheless, the focus on recent developments might introduce temporal biases, affecting the understanding of AI's role evolution. Additionally, reliance on specific databases could have excluded relevant academic contributions that were not indexed in Scopus or Web of Science.

The study of AI in diplomacy is concentrated in British journals, and the topic gained interest in the second half of the studied timeframe, with significant academic production peaking in 2023. The research reveals that discussions often extend beyond AI to encompass broader digital diplomacy contexts.

The categorization of the articles analyzed contributes to giving clarity and organization to the existent academic literature regarding AI's relationship with diplomacy. AI as a Topic on the Agenda underscores the dynamic interplay between global aspirations and actual policy implementations of AI governance. Scholarly analysis reveals discrepancies in the universal conceptualization and application of AI regulations, highlighting the varied approaches between AI powers and the significant influence of private actors in shaping policies. While substantial progress has been made in framing AI within diplomatic and governance dialogues, significant work remains to bridge the gap between policy intentions and their operationalization in diverse global contexts.

The adoption of AI as a tool for diplomacy has gained interest, particularly in handling complex data and real-time analysis crucial for negotiation and conflict management. The nuanced academic discourse reveals challenges in data reliability, ethical robustness, and the necessity for human oversight. These insights advocate for a balanced exploration of AI's capabilities and limitations, ensuring technological advancements support diplomatic practices without compromising ethical and security standards.

AI's role as a geopolitical factor underscores the complex interplay between technology and international power dynamics. Academic literature consistently emphasizes AI's impact on shifting global power structures, particularly highlighting the systemic competition between leading nations like the US and China, as well as emerging powers like India and Russia. Challenges such as achieving digital sovereignty, managing technology dependencies, and the risks of protectionism are critical concerns that influence global diplomatic engagements.

The integration of AI into diplomacy accentuates ethical dilemmas, privacy issues, and human rights concerns. Scholarly work emphasizes the need for robust governance frameworks to navigate these issues effectively. Despite existing efforts to establish ethical guidelines, there remains a critical need for transparent, accountable AI applications that uphold human rights and promote global diplomatic equality.

Integration of the dimensions developed.

Scholarship generally focuses on key subtopics within the analyzed categories, leading to a robust body of academic literature on AI's impact on diplomacy. The research agenda is not only complex but also has profound implications for diplomatic practices. Navigating AI risks is challenging, particularly in the context of systemic rivalries, de-risking processes during international crises such as recent wars and the COVID-19 pandemic, and increasingly contested international law.

This is primarily because developing comprehensive, consensus-based approaches to AI depends on political will, which is undermined by a century-long shift towards power politics and rising tensions among major powers. Nonetheless, ongoing debates in international institutions and political summits have ensured widespread recognition of AI as a pivotal issue. Since international AI governance frameworks are shaped by states' strategic needs to control technological advancements and set ethical standards, competition to influence these rules will be intense.

Recommendations for future research

Future studies should explore AI's concrete applications in diplomatic processes and examine the effects of systemic competition beyond major regional powers. Further exploration into the conceptual debates around AI could illuminate its broader geopolitical and governance impacts.

Based on the data collected for this analysis, several underlying issues can be explored. For instance, in predominantly Asian societies where AI is applied as a decision-making tool in case studies, the concept of personal data protection is not widely adopted. This raises concerns about potential experimentation in less regulated countries. Additionally, there are questions about possible academic imperialism, as reflected in the high number of Asian authors publishing in British journals, which are often regarded as more prestigious. These topics require a deeper investigation that is beyond the scope of this thesis. Furthermore, conducting this research aligns with my professional interest in exploring the intersection of technology and international relations, providing me with a comprehensive understanding of the relationship between AI and diplomacy.

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APPENDICES

APPENDIX 1: Analytical framework.

1. Operationalization of the concepts

AI AS A TOPIC ON THE POLICY AGENDA

Legal/normative dimension

- Overview of AI conceptualization:
  - AI conceptualization debate.
- Current legal frameworks
  - International and national initiatives
  - Hybrid governance (including non-state actors)

Challenges and gaps

- Regulatory gaps:
  - Need of common standards
  - Need of a consensual guide of best practices
- The final goal: AI international regime.

AI AS A TOOL IN FOREING POLICY

Digital diplomacy:

- Role of AI in diplomatic tasks
  - Negotiation
  - Conflict management
  - Decision-making
    - Military decision-making.
    - Other foreign decision-making processes.

Challenges and trends: Trustworthy AI

- Data availability, accessibility, and quality
- Explainable models
- Biases
- Adequate AI solutions

AI AS A FACTOR IN THE INTERNATIONAL SYSTEM.

Geopolitical dimension

- Global Power Dynamics
  - Competition and/or collaboration
  - Emerging AI superpowers
- Security implications
  - AI in warfare and defense
    - Automated Weapons Systems
    - Cybersecurity concerns
  - Sharp power: information warfare
- Economic distortions and opportunities

Challenges and future trends

- Shift of the power structures
  - Digital sovereignty
  - Technology dependencies

CROSS-CUTTING TOPICS

- Ethical considerations
- Privacy concerns
- Human Rights implications

APPENDIX 2: Results of the searches by keywords[7] used chronologically ordered.

- **Table 1 - Results of: "Artificial Intelligence AND governance[8]"**

Authors	Year	Title	Source title	DOI	Database
McEvoy, Fiona J.	2019	Political Machines: Ethical Governance in the Age of AI	Moral Philosophy and Politics	10.1515/mopp-2019-0004	Scopus
Ahmad, Nafees	2020	Refugees and algorithmic humanitarianism: Applying artificial intelligence to RSD procedures and immigration decisions and making global human rights obligations relevant to AI governance	International Journal on Minority and Group Rights	10.1163/15718115-bja10007	Scopus
Gorwa, Robert; Binns, Reuben; Katzenbach, Christian	2020	Algorithmic content moderation: Technical and political challenges in the automation of platform governance	Big Data and Society	10.1177/2053951719897945	Scopus
Lahsen, Myanna	2020	Should ai be designed to save us from ourselves?	IEEE Technology and Society Magazine	10.1109/MTS.2020.2991502	Scopus
Gahnberg, Carl	2021	What rules? Framing the governance of artificial agency	Policy and Society	10.1080/14494035.2021.1929729	Scopus
Johnson, Walter G.; Bowman, Diana M.	2021	A Survey of Instruments and Institutions Available for the Global Governance of Artificial Intelligence	IEEE Technology and Society Magazine	10.1109/MTS.2021.3123745	Scopus
Liu, Hin-Yan; Maas, Matthijs M.	2021	'Solving for X?' Towards a problem-finding framework to ground long-term governance strategies for artificial intelligence	Futures	10.1016/j.futures.2020.102672	Scopus
Palladino, Nicola	2021	The role of epistemic communities in the "constitutionalization" of internet governance: The example of the European Commission High-Level Expert Group on Artificial Intelligence	Telecommunications Policy	10.1016/j.telpol.2021.102149	Scopus
Auld, Graeme; Casovan, Ashley; Clarke, Amanda; Faveri, Benjamin	2022	Governing AI through ethical standards: learning from the experiences of other private governance initiatives	Journal of European Public Policy	10.1080/13501763.2022.2099449	Scopus
Bradley, Fiona	2022	Representation of Libraries in Artificial Intelligence Regulations and Implications for Ethics and Practice	Journal of the Australian Library and Information Association	10.1080/24750158.2022.2101911	Scopus
Fosch-Villaronga, Eduard; Drukarch, Hadassah; Khanna, Pranav; Verhoef, Tessa; Custers, Bart	2022	Accounting for diversity in AI for medicine.	Computer Law and Security Review	10.1016/j.clsr.2022.105735	Scopus
Justo-Hanani, Ronit	2022	The politics of Artificial Intelligence regulation and governance reform in the European Union	Policy Sciences	10.1007/s11077-022-09452-8	Scopus
Mittelman, James H.	2022	The Power of Algorithmic Capitalism	International Critical Thought	10.1080/21598282.2022.2070858	Scopus

[7] The keywords were selected based on the analytical framework operationalization outline in Appendix 1.
[8] For refine this search additional parameters were added, due to the high quantity of results that were not related to either the topic or purpose of this thesis. The presence within "All fields" of keywords such as "international relations" AND/OR "world politics" AND/OR "international politics" were also required.

Nathan, Christopher; Hyams, Keith	2022	Global policymakers and catastrophic risk	Policy Sciences	10.1007/s11077-021-09444-0	Scopus
Bode, Ingvild; Huelss, Hendrik; Nadibaidze, Anna; Qiao-Franco, Guangyu; Watts, Tom F.A.	2023	Prospects for the global governance of autonomous weapons: comparing Chinese, Russian, and US practices	Ethics and Information Technology	10.1007/s10676-023-09678-x	Scopus
Can, Muhammed	2023	Under the leadership of our president: 'Potemkin AI' and the Turkish approach to artificial intelligence	Third World Quarterly	10.1080/01436597.2022.2147059	Scopus
Erkkilä, Tero	2023	Global indicators and AI policy: Metrics, policy scripts, and narratives	Review of Policy Research	10.1111/ropr.12556	Scopus
Feldstein, Steven	2023	Evaluating Europe's push to enact AI regulations: how will this influence global norms?	Democratization	10.1080/13510347.2023.2196068	Scopus
Francisco, Marie; Linnér, Björn-Ola	2023	AI and the governance of sustainable development. An idea analysis of the European Union, the United Nations, and the World Economic Forum	Environmental Science and Policy	10.1016/j.envsci.2023.103590	Scopus
Mügge, Daniel	2023	The securitization of the EU's digital tech regulation	Journal of European Public Policy	10.1080/13501763.2023.2171090	Scopus
Palladino, Nicola	2023	A 'biased' emerging governance regime for artificial intelligence? How AI ethics get skewed moving from principles to practices	Telecommunications Policy	10.1016/j.telpol.2022.102479	Scopus
Roberts, Huw; Cowls, Josh; Hine, Emmie; Morley, Jessica; Wang, Vincent; Taddeo, Mariarosaria; Floridi, Luciano	2023	Governing artificial intelligence in China and the European Union: Comparing aims and promoting ethical outcomes	Information Society	10.1080/01972243.2022.2124565	Scopus
Sepasspour, Rumtin	2023	A reality check and a way forward for the global governance of artificial intelligence	Bulletin of the Atomic Scientists	10.1080/00963402.2023.2245249	Scopus
Tallberg, Jonas; Erman, Eva; Furendal, Markus; Geith, Johannes; Klamberg, Mark; Lundgren, Magnus	2023	The Global Governance of Artificial Intelligence: Next Steps for Empirical and Normative Research	International Studies Review	10.1093/isr/viad040	Scopus
von Ingersleben-Seip, Nora	2023	Competition and cooperation in artificial intelligence standard setting: Explaining emergent patterns	Review of Policy Research	10.1111/ropr.12538	Scopus

- **Table 2 - Results of: "Artificial Intelligence AND diplomacy"**

Authors	Year	Title	Source title	DOI	Database
Geist, Edward Moore	2016	It's already too late to stop the AI arms race - We must manage it instead	Bulletin of the Atomic Scientists	10.1080/00963402.2016.1216672	Scopus
KECK, Stephen	2018	Introducing SEABOT: Methodological Quests in Southeast Asian Studies	Suvannabhumi: Multidisciplinary Journal of Southeast Asian Studies		WofS
Robertson, Jeffrey	2018	Organizational culture and public diplomacy in the digital sphere: The case of South Korea	Asia and the Pacific Policy Studies	10.1002/app5.256	Scopus
Song, Tae-Eun	2019	Psychological Warfare and Authoritarian Sharp Power Attack in the Digital Age: Russia's Cyber Propaganda and the West's Response	Korean Journal of International Relations		WofS
Feijóo, Claudio; Kwon, Youngsun; Bauer, Johannes M.; Bohlin, Erik; Howell, Bronwyn; Jain, Rekha; Potgieter, Petrus; Vu, Khuong; Whalley, Jason; Xia, Jun	2020	Harnessing artificial intelligence (AI) to increase wellbeing for all: The case for a new technology diplomacy	Telecommunications Policy	10.1016/j.telpol.2020.101988	Scopus
Levin, Dave	2020	CAREER: Automatically Learning to Evade Internet Censorship			WofS
Jarrín, Mario Torres	2021	EU & Ethics Governance of the Artificial Intelligence: Artificial Intelligence & Diplomacy; [la UE & la gobernanza ética de la inteligencia artificial: inteligencia artificial & diplomacia]	Cuadernos Salmantinos de Filosofia		Scopus
Kim, SangBae	2021	International Political Economy of the Digital Platform Competition: Evolution of the US-China Competition for Technological Hegemony			WofS
Ulnicane, Inga; Eke, Damian Okaibedi; Knight, William; Ogoh, George; Stahl, Bernd Carsten	2021	Good governance as a response to discontents? Déjà vu, or lessons for AI from other emerging technologies	Interdisciplinary Science Reviews	10.1080/03080188.2020.1840220	Scopus
Vica, Constantin; Voinea, Cristina; Uszkai, Radu	2021	The emperor is naked: Moral diplomacies and the ethics of AI	Informacios Tarsadalom		WofS
Pandey, Nimita; Srinivas, Krishna Ravi; Deepthi, T R	2022	Emerging Technologies, STI Diaspora and Science Diplomacy in India: Towards a New Approach.	Frontiers in research metrics and analytics		WofS
Young-June, Park	2022	The Strategic Rivalry between the U.S. and China and a Prospects of Future War in the East Asia	National Strategy		WofS
Zhang, Chuchu; Zhang, Minwei; Xiao, Chaowei	2022	From traditional infrastructure to new infrastructure: a new focus of China's Belt and Road Initiative diplomacy?	Eurasian Geography and Economics	10.1080/15387216.2022.2039740	Scopus
Calzada, Igor	2023	Disruptive Technologies for e-Diasporas: Blockchain, DAOs, Data Cooperatives, Metaverse, and ChatGPT	Futures	10.1016/j.futures.2023.103258	Scopus
Chen, Zhixin	2023	The Geopolitics of Public Health and China's Digital Silk Road in Asia	Asiascape: Digital Asia		WofS

Hou, Shu–Min; Fu, Wen-Cheng; Lai, Shao–Yi	2023	Exploring Information Warfare Strategies during the Russia–Ukraine War on Twitter	Korean Journal of Defense Analysis	10.22883/kjda.2023.35.1.002	Scopus
Lebedeva, Marina Mikhailovna; Zinovieva, Elena Sergeevna	2023	International Negotiations in the Digital Age	Vestnik RUDN. International Relations	10.22363/2313-0660-2023-23-1-144-156	Scopus
Muñiz, Manuel	2023	Technology diplomacy for the digital era; [Diplomacia tecnológica para la era digital]	Revista CIDOB d'Afers Internacionals	10.24241/rcai.2023.134.2.91	Scopus
Oloo, Ong'ong'a Daniel	2023	The implementation of the digital diplomacy of the United States, the UK, and China in Kenya	Place Branding and Public Diplomacy	10.1057/s41254-023-00316-3	Scopus
Qiao-Franco, Guangyu; Bode, Ingvild	2023	Weaponised Artificial Intelligence and Chinese Practices of Human-Machine Interaction	Chinese Journal of International Politics		WofS
Reshetnikova, Liudmila M.; Samokhina, Irina M.	2023	Digital Diplomacy and Social Media networks: contemporary practices of innovation in foreign policy	Volgogradskii Gosudarstvennyi Universitet-Vestnik-Seriya 4-Istoriya Regionovedenie Mezhdunarodnye Otnosheniya		WofS
Bjola, Corneliu; Manor, Ilan	2024	Digital diplomacy in the age of technological acceleration: three impact scenarios of generative artificial intelligence	Place Branding and Public Diplomacy	10.1057/s41254-023-00323-4	Scopus
Di Martino, Luigi; Ford, Heather	2024	Navigating uncertainty: public diplomacy vs. AI	Place Branding and Public Diplomacy	10.1057/s41254-024-00330-z	Scopus
Garcia, Eugenio V.	2024	The Other in the machine: diplomacy and the AI conundrum	Place Branding and Public Diplomacy	10.1057/s41254-024-00329-6	Scopus
Huang, Zhao Alexandre	2024	Terminology, AI bias, and the risks of current digital public diplomacy practices	Place Branding and Public Diplomacy		WofS
Sevin, Efe; Eken, M. Evren	2024	Yet another turn? priotising the needs of diplomacy over the capabilities of generative AI	Place Branding and Public Diplomacy		WofS
Xia, Lucie Qian	2024	Diplomatic relationship-building in the age of generative AI: the European Union and China	Place Branding and Public Diplomacy	10.1057/s41254-023-00321-6	Scopus

- **Table 3 - Results of: "Artificial Intelligence AND foreign policy"**

Authors	Year	Title	Source title	DOI	Database
Demertzis, Maria; Merler, Silvia; Wolff, Guntram B.	2018	Capital Markets Union and the Fintech Opportunity	Journal of Financial Regulation	10.1093/jfr/fjx012	WofS
Landon-Murray, Michael; Mujkic, Edin; Nussbaum, Brian	2019	Disinformation in Contemporary U.S. Foreign Policy: Impacts and Ethics in an Era of Fake News, Social Media, and Artificial Intelligence	Public Integrity	10.1080/10999922.2019.1613832	Scopus
Smirnov, E. N.; Lukyanov, S. A.	2019	Development of the Global Market of Artificial Intelligence Systems	Ekonomika Regiona-Economy of Region	10.17059/2019-1-5	WofS
Thomas, Tessa A.; Ray, Korok	2019	Online outsourcing and the future of work	Journal of Global Responsibility	10.1108/JGR-10-2018-0039	WofS
Bonsu, Kwadwo Osei; Song, Jie	2020	Turbulence on the Global Economy Influenced by Artificial Intelligence and Foreign Policy Inefficiencies	Journal of Liberty and International Affairs	10.47305/JLIA2020113ob	Scopus
Romanova, O. A.; Ponomareva, A. O.	2020	Industrial Policy: New Realities, Formation and Implementation Issues	Economic and Social Changes-Facts Trends Forecast	10.15838/esc.2020.2.68.2	WofS
Sharfuddin, Syed	2020	The world after Covid-19	Round Table	10.1080/00358533.2020.1760498	Scopus
Wang, Lu; Luo, Gong-li; Sari, Arif; Shao, Xue-Feng	2020	What nurtures fourth industrial revolution? An investigation of economic and social determinants of technological innovation in advanced economies	Technological Forecasting and Social Change	10.1016/j.techfore.2020.120305	WofS
Kharitonova, Yu S.; Savina, V. S.; Pagnini, F.	2021	Artificial intelligence's algorithmic bias: ethical and legal issues	Vestnik Permskogo Universiteta-Juridicheskie Nauki	10.17072/1995-4190-2021-53-488-515	WofS
Kim, Yujeong	2021	Prospects for cooperation between Russia and the Republic of Korea in the fields of big data, network and artificial intelligence for the development of the digital economy	Mirovaya Ekonomika I Mezhdunarodnye Otnosheniya	10.20542/0131-2227-2021-65-8-51-60	WofS
Varfolomeev, Anton A.; Ivanov, Oleg P.; Surma, Ivan V.; Trefilova, Yulia A.	2021	Expert-analytical support of foreign policy activities	Vestnik MGIMO-Universiteta	10.24833/2071-8160-2021-5-80-22-48	Scopus
Calderaro, Andrea; Blumfelde, Stella	2022	Artificial intelligence and EU security: the false promise of digital sovereignty?	European Security	10.1080/09662839.2022.2101885	Scopus
Dmitrievsky, A. N.; Eremin, N. A.; Safarova, E. A.; Stolyarov, V. E.	2022	Implementation of complex scientific and technical programs at the late stages of operation of oil and gas fields	SOCAR Proceedings	10.5510/OGP2022SI200728	WofS
Hrynkiv, Olga	2022	Export Controls and Securitization of Economic Policy: Comparative Analysis of the Practice of the United States, the European Union, China, and Russia	Journal of World Trade		WofS
Kreps, Sarah; McCain, R. Miles; Brundage, Miles	2022	All the News That's Fit to Fabricate: AI-Generated Text as a Tool of Media Misinformation	Journal of Experimental Political Science	10.1017/XPS.2020.37	Scopus

Zhang, Xiekui; Liu, Peiyao; Zhu, Hongfei	2022	The Impact of Industrial Intelligence on Energy Intensity: Evidence from China	Sustainability	10.3390/su14127219	WofS
Dementiev, Victor E.	2023	Technological sovereignty and priorities of localization of production	Terra Economicus	10.18522/2073-6606-2023-21-1-6-18	WofS
Devi, M. Rugmini; Mammen, Jeffin Thomas; Kumar, R. Girish	2023	Balancing through Technonationalism and its Impact on India's National Innovation System: A Case Study of Techgentsia	Millennial Asia	10.1177/09763996231177366	WofS
Hudima, Tetiana; Kamyshansky, Vladyslav	2023	Artificial Intelligence as a tool for digitalization of foreign economic policy: peculiarities of legal regulation.	Financial and Credit Activity: Problems of Theory and Practice	10.55643/fcaptp.3.50.2023.4039	WofS
Hudima, Tetiana; Trehub, Oleksandr; Kamyshanskyi, Vladyslav	2023	International Digital Trade & Digital Economy Agreements: challenges and prospects for Ukraine	Financial and Credit Activity: Problems of Theory and Practice	10.55643/fcaptp.5.52.2023.4139	WofS
Khan, Habib Hussain; Khan, Shoaib; Ghafoor, Abdul	2023	Fintech adoption, the regulatory environment and bank stability: An empirical investigation from GCC economies	Borsa Istanbul Review	10.1016/j.bir.2023.10.010	WofS
Kljucnikov, Aleksandr; Popkova, Elena G.; Sergi, Bruno S.	2023	Global Labour markets and workplaces in the age of intelligent machines	Journal of Innovation and Knowledge	10.1016/j.jik.2023.100407	WofS
Lin, Bibo	2023	Beyond authoritarianism and liberal democracy: understanding China's artificial intelligence impact in Africa	Information Communication and Society	10.1080/1369118X.2023.2239322	WofS
Yang, Xiaoyun	2023	Role of green finance and investment in sustainable resource development in China	Resources Policy	10.1016/j.resourpol.2023.104219	WofS
Zhang, Yuyang	2023	Analysis of Benefits and Security of China's Foreign Investment with Artificial Intelligence under the Belt and Road	Applied Artificial Intelligence	10.1080/08839514.2023.2219562	WofS

- **Table 4 - Results of: "Artificial Intelligence AND geopolitics[9]"**

Authors	Year	Title	Source title	DOI	Database
Shaw, Ian GR	2017	Robot Wars: US Empire and geopolitics in the robotic age	Security Dialogue	10.1177/0967010617713157	Scopus
Kalantzakos, Sophia	2020	The Race for Critical Minerals in an Era of Geopolitical Realignments	International Spectator	10.1080/03932729.2020.1786926	Scopus
Biegon, Rubrick; Watts, Tom F. A.	2022	Remote Warfare and the Retooling of American Primacy	Geopolitics	10.1080/14650045.2020.1850442	Scopus
Kamruzzaman, M.M.	2022	Impact of Social Media on Geopolitics and Economic Growth: Mitigating the Risks by Developing Artificial Intelligence and Cognitive Computing Tools	Computational Intelligence and Neuroscience	10.1155/2022/7988894	Scopus
Lustick, Ian S.	2022	Geopolitical Forecasting and Actionable Intelligence	Survival	10.1080/00396338.2022.2032959	Scopus
Cantero Gamito, Marta	2023	The influence of China in AI governance through standardisation	Telecommunications Policy	10.1016/j.telpol.2023.102673	Scopus
Ruppert, Linda	2024	Geopolitics of Technological Futures: Warfare Technologies and Future Battlefields in German Security Debates	Geopolitics	10.1080/14650045.2023.2174431	Scopus
Baechle, Thomas Christian; Bareis, Jascha	2022	Autonomous weapons as a geopolitical signifier in a national power play: analysing AI imaginaries in Chinese and US military policies	European Journal of Futures Research	10.1186/s40309-022-00202-w	WofS
Dear, Keith	2022	Beyond the 'Geo' in Geopolitics The Digital Transformation of Power	RUSI Journal	10.1080/03071847.2022.2049167	WofS
Francisco, Marie	2023	Artificial intelligence for environmental security: national, international, human and ecological perspectives	Current Opinion in Environmental Sustainability	10.1016/j.cosust.2022.101250	WofS
Sharma, Sanur	2023	Trustworthy Artificial Intelligence: Design of AI Governance Framework	Strategic Analysis	10.1080/09700161.2023.2288994	WofS
Meltzer, Joshua P.	2024	The Impact of Foundational AI on International Trade, Services and Supply Chains in Asia	Asian Economic Policy Review	10.1111/aepr.12451	WofS

[9] Regarding WofS the search used was the abbreviation "AI" instead, due to the poorness of the results with the entire phrase. Thus, the search formula in this case was AI AND geopolitics.