UDC: 004.8:003 Info M str. 40-46

RESPONSIBILITY TOWARD TRUTH – ETHICAL STANDARDS IN THE DEVELOPMENT OF AI SIMULATIONS OF HISTORICAL FIGURES
ODGOVORNOST PREMA ISTINI – ETIČKI STANDARDI U RAZVOJU AI SIMULACIJA ISTORIJSKIH LIČNOSTI

Dr Milena Škobo, Milena Šović

ABSTRACT: The development of chatbots and digital simulations of historical figures using artificial intelligence opens up a range of ethical, legal, and cultural issues. Although, after 70 years from a person's death, their image and work enter the public domain, allowing their use without the consent of heirs or copyright holders, this fact does not exempt the creators of digital reconstructions from ethical responsibility. The aim of this paper is to explore how the relationship toward historical truth, identity, and cultural heritage is shaped in the age of simulation and generative AI technologies, with a particular focus on the digital representations of Nikola Tesla and Branislav Nušić. These examples are analyzed as relatively positive practices, as they strive to affirm educational values and cultural memory while attempting to remain faithful to the original ideas and styles of the personalities they simulate. The paper also warns of the potential risks of trivialization, superficial interpretation, and misuse of such tools, especially in educational contexts. The study stresses the imperative to institute ethical standards that would govern the development and utilization of AI simulations of historical figures, with particular emphasis on truthfulness, cultural context, and the dignity of the simulated individuals.

KEY WORDS: artificial intelligence, historical figures, ethics, cultural heritage, digital reconstruction, education.

REZIME: Razvoj četbotova i digitalnih simulacija istorijskih ličnosti uz pomoć veštačke inteligencije otvara čitav niz etičkih, pravnih i kulturoloških pitanja. Iako nakon sedamdeset godina od smrti određene ličnosti njen lik i delo prelaze u javno vlasništvo, što omogućava njihovu upotrebu bez saglasnosti naslednika ili nosilaca autorskih prava, ta pravna činjenica ne oslobađa autore digitalnih rekonstrukcija etičke odgovornosti. Cilj ovog rada je da istraži na koji način se u dobu simulacije i generativnih AI tehnologija oblikuje odnos prema istorijskoj istini, identitetu i kulturnom nasleđu, sa posebnim osvrtom na digitalne reprezentacije Nikole Tesle i Branislava Nušića. Navedeni primeri analiziraju se kao relativno pozitivne prakse, jer nastoje da afirmišu obrazovne vrednosti i kulturno pamćenje, uz nastojanje da ostanu verni izvornim idejama i stilu ličnosti koje simuliraju. Istovremeno, rad ukazuje na potencijalne rizike trivijalizacije, površnog tumačenja i zloupotrebe ovakvih alata, naročito u obrazovnom kontekstu. U studiji se posebno naglašava neophodnost uspostavljanja etičkih standarda koji bi regulisali razvoj i primenu AI simulacija istorijskih ličnosti, sa akcentom na istinitost, kulturni kontekst i dostojanstvo simuliranih pojedinaca.

KLJUČNE REČI: veštačka inteligencija, istorijske ličnosti, etika, kulturno nasleđe, digitalna rekonstrukcija, obrazovanje.

INTRODUCTION

A chatbot is a software program designed to simulate human conversation, capable of processing and understanding written text as well as voice messages. It facilitates interactive dialogue between users and computer systems, thereby enabling communication in various digital and service-oriented contexts [1]. Historical chatbots represent a novel form of digital education, enabling users to engage in discourse with significant figures from the past and thereby gain insight into their thoughts, attitudes, and actions. Examples of such chatbots include simulations of scientists, writers, or politicians, which are used in educational and cultural projects [2].

While the concept of creating artificial intelligence simulations of historical figures is intellectually stimulating, it is also fraught with complex epistemological and technological challenges. Despite advances in natural language processing and machine learning, fully and faithfully recreating a historical persona remains beyond current capabilities. This is primarily due to limitations in the available data, the unreliability of historical sources, and the inevitable loss of context over time. Much of the historical record is incomplete; personal letters, diaries and other documents are frequently lost, censored or influenced by the ideological and cultural pressures of the time in which they were written [3]. Even when such materials are available, they rarely capture the full range of an individual's psychological, emotional, and intellectual life. Furthermore, historical figures are frequently interpreted through the lens of contemporary value systems, introducing present biases into AI training models and simulations. Therefore, these reconstructions cannot reproduce an authentic subjectivity, but rather reflect a filtered and often idealised projection of the past.

Furthermore, artificial intelligence lacks the capacity to simulate the dynamism of human development. Historical figures underwent changes in opinion, temperament, and worldview that are rarely traceable in surviving records. Consequently, most AI-based personas tend to be static and decontextualised, offering only a snapshot of a person's life rather than an evolving narrative. Nevertheless, these limitations do not negate the potential value of AI historical simulations [3]. When they are designed with academic rigour and are based on verified sources, such simulations can become meaningful pedagogical tools when they are developed with full transparency about their interpretive frameworks. They facilitate interactive engagement with historical knowledge and stimulate critical thinking about the nature of historical representation.

While the pursuit of absolute authenticity may remain unattainable, a responsible, ethically informed approach to AI design, one that prioritises historical fidelity and interpretive honesty, of-

fers a viable path forward. Rather than reviving the past, these technologies have the capacity to shed light on it, thereby rendering history more accessible and reflective of its intricacies.

The presented paper is distinct from extant studies in that it does not merely analyze the technical aspects of developing chatbots and digital simulations of historical figures, but rather concurrently integrates the ethical, legal, and cultural dimensions of this process. While extant studies frequently concentrate on generative AI technologies or the legal ramifications of public domain status following a seventy-year period subsequent to the demise of an individual, this paper additionally explores how the relationship with historical truth, identity, and cultural heritage is shaped in practice. Moreover, the study employs concrete exemplars – the digital representations of Nikola Tesla and Branislav Nušić as models of good practice, thereby illustrating the application of ethical standards in real-world simulations. The paper also underscores the potential risks of misuse and superficial interpretation of such tools, particularly in educational contexts, a topic that has not been systematically addressed in the literature. This study employs a holistic approach, integrating technology, ethics, and cultural responsibility, and it offers concrete guidelines for the future application of AI in preserving cultural heritage.

The following is the structure of the paper: the paper commences with an introduction that presents the subject, research objectives, and the study's significance, in addition to the methodology employed in the analysis. The initial section explores the issue of authenticity and the ethical challenges posed by AI-based simulations of historical figures, with a particular focus on the concept of "digital resurrection" and its implications in contemporary society. The subsequent section undertakes a thorough examination of legal frameworks and boundaries, with a particular focus on the transition from legal permission to moral responsibility within the paradigm of digital reconstructions of individuals. The third section of this text presents principles and standards for authentic and ethical simulations of historical figures. These standards can serve as guidelines for the future development of this field. The final section of the paper presents a model of good practice through the development of Tesla and Nušić chatbots, thereby demonstrating the potential of artificial intelligence in the preservation of cultural heritage and the use of digital simulations in educational applications. The paper's conclusion synthesizes the key findings, offers recommendations for future research, and emphasizes the importance of an ethical approach in this domain.

AUTHENTICITY AND ETHICAL CHALLENGES IN AI-BASED SIMULATIONS OF HISTORICAL FIGURES

The concept of developing chatbots with historical accuracy emerged as a response to the perceived lack of authenticity in many existing AI simulations of historical figures. On one widely utilised platform offering such chatbots, a conversation with a simulation of Wolfgang Amadeus Mozart revealed striking inconsistencies: the figure responded in fluent modern English, discussed contemporary films, and offered opinions on the greatest composers of the 20th century [4]. These anachronisms serve to underscore a more extensive problem, namely that the majority of these bots demonstrate an inability to respect historical time periods, cultural contexts, and the intellectual frameworks of the figures they aim to represent. It is evident that the responses exhibited by these entities are frequently founded upon unverified sources or generic public data, which has the potential to be both inaccurate and misleading, or to present the subject matter in an overly simplistic manner. Furthermore, it should be noted that the majority of these simulations are only available in English, a fact which has a detrimental effect on their accessibility and relevance in non-Anglophone contexts.

The creation of AI simulations of historical figures gives rise to a number of significant ethical concerns, especially in the context of their use in educational or cultural settings. A significant challenge pertains to the issue of fabrication: AI models frequently generate content, attributing opinions, beliefs, and knowledge to individuals who never expressed them, or having them comment on events that transpired after their demise. Another concern pertains to the idealisation of historical figures, wherein they are presented in a simplistic, excessively sympathetic light, devoid of their internal conflicts or controversial positions. Depoliticization is also a common phenomenon [4]. Socially sensitive or politically charged aspects of a figure's life or era are frequently omitted, leading to a sanitized and distorted representation of the past. Finally, there is the issue of commodification and exploitation, where historical identities are used for commercial purposes, resulting in ethically questionable applications. One such example is a simulation of Aristotle advertising consumer products.

In light of the aforementioned risks, it is imperative to establish ethical standards that govern the creation and utilisation of AI simulations of historical figures. Such standards should promote historical accuracy, contextual integrity, and a respectful representation of the complexities and contradictions that define real human lives.

DIGITAL RESURRECTION AND LEGAL BOUNDARIES

The rapid development of artificial intelligence has precipitated not only technological innovation but also a series of complex ethical and legal dilemmas. In order to undertake a thorough examination of the extent to which contemporary information technology solutions are employed within the legal sector of a specific nation, it is imperative to devise a systematic approach for evaluating the predominance of these technological frameworks. Such a methodology would facilitate systematic evaluation and comparison across different regions or legal sectors [5].

Of particular concern is the use of artificial intelligence to simulate historical figures, a practice that gives rise to significant ethical and legal dilemmas. These dilemmas pertain to the boundaries between creative freedom, historical responsibil-

ity, and the legal protection of identity. The use of simulated personas, complete with reconstructed voices, facial expressions and behavioural patterns, frequently results in a blurring of the line between historical representation and fictional reinterpretation. As these technologies become increasingly accessible, the need to establish clear ethical and legal frameworks becomes not only relevant but urgent [2].

From an ethical perspective, the simulation of historical figures gives rise to the concept of truth in public discourse. It is important to note that AI reconstructions, particularly those generated with limited historical data, may introduce distortions, anachronisms, or speculative elements that the audience is unable to recognize as artificial. When presented through interfaces that appear authentic in terms of visual and auditory aspects, such representations risk engendering historical misinterpretations or misleading impressions, a risk that is especially pertinent when they are employed in educational settings, media, or political discourse. The ethical obligation to preserve historical truth, particularly in relation to public memory and collective identity, therefore demands careful scrutiny of the intentions and methods behind such simulations. The utilisation of AI to emulate the voice of a Holocaust victim or a political leader, for instance, is not merely a matter of technological capability; it is also a matter of moral responsibility [5].

Concurrent with these ethical considerations, the development of legal frameworks has sought to address the unauthorised use of a person's likeness, especially in jurisdictions where the so-called "right of publicity" is recognised. In the United States, a number of states have enacted legislation that affords strong post-mortem publicity rights, thereby enabling the families or estates of deceased individuals to exercise control over the commercial utilisation of their image, voice, and other attributes. For instance, the state of California offers protection for a period of up to 70 years following the death of the individual concerned, while the state of Indiana extends this right to a period of 100 years [6]. In the case of the Republic of Serbia, the Copyright and Related Rights Law stipulates that the economic rights of authors last for the duration of their lifetime and seventy years after their death [7]. This allows for the legal use of copyrighted works after the conclusion of this period. However, the moral rights of authors in Serbia do not transfer to heirs and expire upon the author's death. The issue at hand is the absence of a comprehensive legal framework that adequately regulates the "right to one's likeness, name, or voice" in the aftermath of an individual's demise. This right is not explicitly addressed in public sources, leaving a significant gap in legal protection. This indicates that even after the expiration of copyrights, there are potential risks associated with the private or contractual rights of heirs that are not systematically institutionalized.

Consequently, it cannot be definitively stated that the use of a historical figure's likeness or voice after seventy years is free of legal restrictions, indicating the need for additional legal verification and consultation with intellectual property experts. A comparison of the situation in the United States and Serbia reveals notable disparities. The regulation of publicity rights in the United States varies from state to state, whereas in Serbia, it is uniform at the national level. For instance, in the state of Indiana, a particular statute (Indiana Code § 32-36-1-8) exists that dictates the duration of the right to utilize a deceased individual's likeness, name, and voice [8]. This right is valid for a period of up to 100 years following the individual's demise and is exclusively applicable for commercial exploitation, with the explicit condition that prior written consent is obtained. In a similar vein, other states, such as California, have established a term of 70 years. However, it should be noted that some states have not explicitly delineated a post-mortem right of publicity. Furthermore, if the individual was not a resident of a particular state or did not engage in commercial activity within that territory, complex legal issues related to territoriality and applicability of the law may arise.

In practice, the employment of a digital "twin" of a historical figure must be meticulously planned. First, it is necessary to determine in which jurisdiction the simulation will be published or used, and whether the use is commercial or non-commercial. Secondly, it is imperative to ascertain whether the individual possessed any rights that could be inherited and whether the relevant state has stipulated a post-mortem term for the utilization of their likeness, name, or voice. Thirdly, ethical considerations must be taken into account, as even legally permissible use may carry risks of violating dignity or misinterpreting cultural heritage. In Serbia, while the copyright of works can be readily verified, the absence of a definitive legal framework for the "right to one's likeness" signifies a substantial legal risk that necessitates proper attention prior to the implementation of any commercial or public application. While these provisions were primarily designed to protect celebrities, it is possible that they may offer a legal basis for contesting unapproved AI simulations of any deceased individual whose identity holds public relevance [9].

In the European context, while the General Data Protection Regulation (GDPR) does not apply to the deceased, ethical principles embedded in European legal traditions, such as the dignity of the individual and the protection of historical memory, indirectly inform discussions about AI-generated representations. The recently adopted EU Artificial Intelligence Act introduces specific obligations for systems classified as "high-risk," including those capable of manipulating human behaviour or impersonating individuals. Despite the absence of explicit regulation of posthumous simulations, the law establishes a precedent for stricter oversight of AI-generated content that may mislead or emotionally manipulate audiences [10].

Moreover, in response to mounting concerns regarding the dissemination of misinformation and the unauthorised use of deepfake technology, several nations have initiated the implementation of legislative measures targeting the unauthorised use of such technology. In the state of California, the dissemination of political deepfakes has been prohibited within 60 days of an election, while the People's Republic of China has mandated the clear labelling of synthetic media. These legal trends indicate a growing global recognition that digital simulations, even of public figures or historical personalities, are not merely creative expressions but potentially powerful tools of influence that require regulation.

FROM LEGAL PERMISSION TO MORAL RESPONSIBILITY

Following a period of 70 years from the death of an individual, their image and works enter the public domain, legally permitting unrestricted use without the consent of heirs or copyright holders. Such practices give rise to a range of ethical concerns. The advent of modern technologies founded upon artificial intelligence has facilitated the development of digital reconstructions and chatbots that emulate historical figures. However, these innovations have been characterised by a lack of clearly defined standards to ensure authenticity [11].

While the legal framework is unambiguous, the moral justification of such practices remains questionable. The process of metamorphosing the image of a historical figure into a digital interlocutor engenders a domain in which there is a significant risk of violating the integrity and symbolic meaning that the individual held within their historical, cultural, and ideological context. Of particular concern is the utilisation of such simulations within educational settings, where students and young individuals may develop perceptions of historical figures based not on substantiated sources, but rather on arbitrary interpretations generated by systems that are not subject to scholarly oversight. In the context of academic and educational use, AI simulations may serve a valuable role in revitalizing interest in history or enhancing pedagogical methods. However, even in these contexts, transparency and accuracy must be preserved. The distinction between dramatization and documentation should be explicit, and the sources informing the simulation should be disclosed. Without such standards, even well-intentioned reconstructions may contribute to historical revisionism or unintentional myth-making.

An ethical approach to the development of such tools must include a sense of responsibility toward historical truth, respect for cultural heritage, and awareness of the significance of the personalities being digitally reconstructed. It is imperative to establish explicit standards that delineate the boundaries between technological innovation and cultural responsibility, with a view to averting the trivialisation and commercialisation of historical identities.

PRINCIPLES AND STANDARDS FOR AUTHENTIC AND ETHICAL SIMULATIONS OF HISTORICAL FIGURES

As AI technologies are increasingly deployed to simulate historical personae, the need for explicit ethical frameworks and standards of historical authenticity becomes ever more urgent. The fundamental prerequisite is that every simulation must be based on verifiable and reliable sources [12]. The historical data that is utilised as the basis for constructing the model must be substantiated and pertinent to circumvent the fabrication of facts or the distortion of concepts.

Another fundamental requirement is the respect for historical boundaries. It is imperative that simulations are constrained within the temporal, cultural, and contextual frameworks of the personality depicted, in order to prevent anachronisms or inappropriate interpretations that distort the true character and significance of the historical figure [13].

It is crucial that the methodology employed in the creation of simulations is transparent. It is very important that all stages of the process, inclusive of the sources utilised, the engineering techniques employed, and the mechanisms for human control and oversight, are meticulously documented and made readily available to the public. This approach is conducive to the principles of scientific reproducibility and engenders a sense of confidence among users and the general public.

Furthermore, the development of such systems should be overseen by historians, linguists and legal professionals, thereby ensuring that simulations are credible, viewed from multiple perspectives and in accordance with legal and ethical norms [14].

It is vital to recognise the paramount ethical obligation of transparent labelling of simulations as such, eschewing the utilisation of euphemistic terms such as “reconstructions of truth” or “resurrected” historical identities. Users must understand the limitations of digital representations and recognise that they are merely proxies for the meticulously documented historical reality. The application of these principles enables simulations of historical figures to become valuable tools in education, culture, and public discourse, while respecting the integrity of the past and responsibility towards the present.

TECHNICAL AND IMPLEMENTATION GUIDELINES FOR AI SIMULATIONS OF HISTORICAL FIGURES

Ensuring the technical integrity of AI simulations of historical figures requires a framework grounded in transparency, reproducibility, and interdisciplinary oversight [15], [16]. Such systems are typically developed through a retrieval-augmented generation (RAG) architecture, which combines a large language model (LLM) with a verified historical corpus. This corpus, consisting of authenticated letters, manuscripts, autobiographical materials, and archival documents, serves as the sole factual basis, minimizing hallucination and distortion. Each source should include metadata describing origin, authorship, and reliability to allow traceability and later review [15].

The system prompt must establish clear temporal and linguistic boundaries consistent with the simulated figure’s lifetime, while semantic and ethical filters should prevent the generation of anachronistic, speculative, or inappropriate content [16], [17]. A human-in-the-loop process, involving historians, linguists, legal scholars, and AI engineers, is essential to periodically evaluate the system’s outputs, correct inconsistencies, and update verified data [16].

From an implementation standpoint, simulations should be explicitly labelled as digital reconstructions, with documented datasets and applied filters [17]. Fine-tuning on unverified internet data should be avoided, and privacy-preserving deployments (local or offline) prioritized in educational or museum environments [18]. Interaction logs enable moderation, accountability, and continuous calibration [19]. Together, these practices define a technically sound and ethically defensible model for AI-based digital reconstructions.

TESLA AND NUŠIĆ CHATBOTS AS A MODEL OF GOOD PRACTICE IN AI-BASED CULTURAL HERITAGE PRESERVATION

The advent of digital chatbots that emulate historical figures presents a dual challenge and opportunity for innovative approaches to education and cultural heritage. Two successful examples of such implementation are the Nikola Tesla and Branislav Nušić chatbots, developed with the aim of promoting educational values and preserving the cultural memory of Serbia [20], [21].

In the design of these chatbots, a wide range of reliable and verifiable sources were used, including personal letters, autobiographical texts, archived interviews, scientific publications, and well-documented biographical data. It is important to note that particular care was taken to ensure the preservation of the authentic linguistic style, temporal context, and cultural framing. This was done in order to avoid anachronistic or factually inaccurate representations.

The development process was overseen by experts in history, literature, linguistics and law. The content was selected and validated by historians to ensure the representation of historical figures was accurate. Linguists were responsible for ensuring the language and style of each character corresponded to the era and origin. Finally, legal professionals ensured compliance with copyright and ethical standards.

In the development of a chatbot based on the life and legacy of Nikola Tesla, a high standard of historical and ethical responsibility was applied. In order to ensure the veracity of the simulation, a renowned biographer of Nikola Tesla was consulted. The objective of the project was to devise a digital interlocutor that would authentically reflect Tesla's personality, expressive style, and modes of thinking. The language model was adapted to communicate in all the languages Tesla spoke, including Serbian, English, French, German and Czech. Particular attention was given to archaic forms and stylistic nuances characteristic of the era in which he lived [20].

In addition to ensuring linguistic and historical accuracy, the model was designed to respect ethical principles in digital communication. The chatbot was trained to respond only to appropriate questions by applying predefined constraints in prompt engineering and semantic filters. This approach was adopted to preserve the dignity of the simulated figure and to minimise the risk of misuse. The development process involved a team of experts in philology, history, ethics, and artificial intelligence, with each stage subjected to critical peer review. This approach not only contributes to the preservation of historical authenticity but also represents a model of best practice in the ethical design of historical figure simulations, emphasising the importance of interdisciplinary collaboration and social responsibility in the application of AI technologies [20].

In contrast to the case of Nikola Tesla, the development of a chatbot simulating the personality and legacy of Branislav Nušić has proven to be significantly more challenging. Despite Nušić's prominent role in Serbian literature and public life, the available biographical and linguistic sources are often fragmented, inconsistent, or lacking in critical detail necessary for high-fidelity simulation. A significant proportion of the material derives from literary interpretations, anecdotal accounts, and unverified secondary sources, which complicates the effort to construct a historically accurate and contextually appropriate digital persona.

The development of a chatbot inspired by Branislav Nušić represents one of the first attempts in Serbia to revive cultural and literary heritage through a digital twin powered by artificial intelligence (AI) [21]. Notwithstanding the challenges encountered during the creation process, this innovative tool was designed with the objective of rendering Nušić's humorous and satirical work more accessible and relevant to contemporary audiences, particularly younger generations. The primary function of the chatbot lies in its application within educational contexts, where it can make a substantial contribution to enhancing the quality of teaching and increasing student motivation [20].

In the context of Serbian language and literature instruction, the Nušić chatbot has the potential to serve as a valuable supplementary educational resource. Through precise training and careful source selection, this digital entity is capable of generating high-quality literary analyses, explaining the function of characters in social satire, and offering insights into the stylistic and linguistic strategies Nušić employed in his most famous comedies and feuilletons. The programme is designed to facilitate direct interaction with "Nušić", thereby promoting creative interpretation, linguistic analysis and critical thinking skills. It is, nevertheless, recommended that the implementation of this tool in an educational setting be overseen by a qualified teacher, with the aim of ensuring pedagogical oversight and ethical communication [20].

Beyond the educational setting, the Nušić chatbot also holds potential for use in cultural institutions. Its integration into museum exhibits, thematic installations, and theatre festival programmes enables direct audience interaction with "Nušić" prior to and following performances. In this manner, AI functions as a conduit between traditional culture and contemporary technologies, thereby providing an innovative model for the preservation and promotion of Serbian literary heritage.

A further significant challenge in developing the Nušić-inspired chatbot was the faithful reproduction of his humour, which is deeply rooted in a specific cultural and historical context. It is important to note that humour is not a universal category; it is dependent upon the spirit of the time, sentence rhythm, word choice, and meanings that are often lost when translated into modern language. Should the chatbot utilise contemporary vocabulary and expressions, there is a risk of deviating from Nušić's authentic style, thereby creating the impression of a 21st century author imitating Nušić, rather than faithfully reviving him.

A particular issue is also the transmission of the context in which Nušić created his work. His humour was not merely a form of wordplay, but rather a sophisticated critique of society, targeting the political circumstances of the time, the

petty-bourgeois mentality, bureaucracy, and social hypocrisy. While the chatbot may be capable of identifying patterns in Nušić's language and style, it would face significant challenges in comprehending the underlying motivations behind the jokes and their historical context. Replacing the satirical moments with more general or mundane humour would result in the loss of the intricate sharpness that lends Nušić's prose its vividness and contemporary relevance.

An empirical evaluation conducted with 50 experts demonstrated that the Nušić chatbot was able to generate stylistically convincing texts that frequently misled even trained readers. Participants were asked to identify the authorship of eight short literary excerpts – four authentic passages by Nušić and four produced by the chatbot. The results showed that chatbot-generated passages were often misattributed to Nušić, with 64% of respondents incorrectly believing that one AI-generated excerpt was written by him, and only 18% correctly identifying it as artificial. Similarly, another excerpt was seen as authentic by 54% of participants, while only 20% recognized it as AI-generated. 44.5% of all responses attributed AI-generated passages to Nušić, whereas only 31.5% of responses misidentified authentic Nušić texts as artificial. These findings indicate a pronounced asymmetry: participants were more likely to mistake AI-generated texts for Nušić's originals than to doubt the authenticity of the actual texts. The study thus highlights not only the stylistic fidelity achieved by the chatbot but also the ease with which the illusion of literary authenticity can be produced using generative AI technologies [21].

Nevertheless, the question remains: can such a chatbot still have value? If it is not regarded as a strict digital reincarnation of Nušić, but rather as a contemporary interpreter of his spirit, it could become an interesting tool for interpreting and updating Nušić's satire. Rather than adhering to a literal interpretation, the chatbot could adopt Nušić's approach, which entails the recognition and analysis of contemporary absurdities, drawing inspiration from his distinctive style. In this manner, the fundamental nature of the satire would be maintained, despite inevitable alterations in its articulation [20].

It is evident that the Nušić chatbot is still in the active phase of development and refinement, due to the limitations previously mentioned. The project team continues to collaborate with literary scholars, archivists, and language experts in order to gather, authenticate, and structure the available materials. The reconstruction of Nušić's linguistic style, satirical tone and socio-political references embedded in his works is a particular challenge. These elements are essential to conveying the depth and nuance of his character in digital form. Pending the establishment and validation of the necessary corpus, the chatbot will be designated a "prototype under academic review," with transparency regarding its limitations and the ongoing nature of the research.

The simulated nature of the chatbots is clearly marked. Users are provided with detailed information about the data sources and technological limitations to prevent confusion between authentic historical figures and their digital representations. These chatbots function as interactive educational tools, with the objective of encouraging users to explore and critically evaluate the presented information.

The Nikola Tesla and Branislav Nušić chatbots have been shown to be highly effective in educational institutions and cultural centres, where they promote engagement, increase interest in history, and contribute to the preservation of national cultural heritage. This balanced approach entails the utilisation of technology as a complement to, rather than a substitute for, conventional knowledge sources and critical thinking processes.

These chatbots illustrate how digital simulations of historical figures can be responsibly developed with respect for ethical, historical, and legal standards. They point to a sustainable path for the use of artificial intelligence in cultural heritage preservation and education, with a clear awareness of both the potential benefits and the inherent limitations.

CONCLUSION

The use of chatbots to simulate historical figures raises complex questions at the intersection of technological innovation, cultural representation, and ethical responsibility. Although legal frameworks, such as the seventy-year post-mortem expiration of copyright, allow unrestricted digital reproduction of a historical figure's likeness and works, such uses are not inherently ethical or justified. On the other hand, producing digital simulations without verified sources, expert input, or clear disclaimers can spread misinformation, diminish the value of cultural heritage, and misrepresent the individuals portrayed.

In order to ensure that such tools are developed responsibly, it is essential to employ a transparent methodology, to rely on verifiable sources, to collaborate with experts from the humanities and legal fields, and to make clear that the chatbot represents a simulation, not a literal or unmediated recovery of historical truth. When these standards are upheld, chatbots can serve as innovative instruments in education and cultural preservation, as demonstrated by the examples of Tesla and Nušić, where multidisciplinary oversight ensures that users engage with historical content in a contemporary and meaningful way.

By adhering to these principles, developers preserve the integrity of historical interpretation and promote reflective engagement. Rather than accepting information uncritically, users are prompted to interrogate the chatbot's responses, consider alternative perspectives, and situate knowledge within its historical context. This approach transforms the chatbot from a mere repository of facts into an interactive medium for dialogue, reflection and a deeper understanding of the past.

Ethical safeguards, such as content moderation, verified historical data, and protections against distortion, enhance trust in AI tools used for cultural heritage. When combined with scholarly rigour, these simulations can bridge generational gaps, making historical figures relatable to younger audiences while preserving their authentic voice for future study.

Consequently, the future of this technology is contingent not solely on its technical sophistication, but more crucially on the ethical awareness and social responsibility of its creators. As digital and historical realities increasingly converge, developers must uphold a firm commitment to contextual accuracy, critical interpretation, and ethical responsibility when reconstructing the past.

REFERENCES

[1] Matić, R., Kabiljo, M., Janjić, M., Živković, M., & Čabarkapa, M. (2019). Četbot – Digital assistant based on Weaver platform. *Info M,* 70, 20–25. [In Serbian]

[2] Bouras, V., et al. (2023). Chatbots for cultural venues: A topic-based approach. *Algorithms, 16*(7), 339. https://doi.org/10.3390/a16070339

[3] Adamopoulou, E., & Moussiades, L. (2020). An overview of chatbot technology. In A. Ramallo, J. D. Velásquez, & A. J. Tallón-Ballesteros (Eds.), *IFIP Advances in Information and Communication Technology: Vol. 584. Advances in Emerging Computing Technologies* (pp. 373–383). Springer. https://doi.org/10.1007/978-3-030-49186-4_31

[4] Nafis, F., Yahyaouy, A., & Aghoutane, B. (2021). Chatbots for cultural heritage: A real added value. In *Proceedings of the 2nd International Conference on Big Data, Modelling and Machine Learning (BML 2021)* (pp. 502-506). SCITEPRESS. https://doi.org/10.5220/0010737700003101.

[5] https://www.hellohistory.ai/ (accessed on November 1, 2025)

[6] Hopkins, K. B. (2023). When I die put my money in the grave: Creating a federally protected postmortem right of publicity. American Bar Association, Forum on the Entertainment & Sports Industries. Available at: https://www.americanbar.org/groups/entertainment_sports/publications/entertainment-sports-lawyer/esl-39-01-spring-23/when-i-die-put-my-money-the-grave-creating-federally-protected-postmortem-right-publicity/ (accessed on November 7, 2025)

[7] Law on Copyright and Related Rights. (2009). *Official Gazette of the Republic of Serbia*, Nos. 104/2009, 99/2011, 119/2012, 29/2016 (Decision of the Constitutional Court), 66/2019. [In Serbian]

[8] Staff, F. (2024). Indiana Code Title 32. Property § 32-36-1-8. Available at: https://codes.findlaw.com/in/title-32-property/in-code-sect-32-36-1-8/ (accessed on November 7, 2025)

[9] Marković, M., Gostojić, S., & Inđić, D. (2021). Artificial intelligence and law: Review of task automation techniques and tools. *Info M*, (73), 42–48. [In Serbian]

[10] Alalaq, A. S. (2025). Simulating historical figures through artificial intelligence. *University of Kufa*. https://doi.org/10.13140/RG.2.2.23909.31207

[11] Rodríguez Reséndiz, H., & Rodríguez Reséndiz, J. (2024). Digital Resurrection: Challenging the Boundary between Life and Death with Artificial Intelligence. *Philosophies*, *9*(3), 71. https://doi.org/10.3390/philosophies9030071.

[12] Haneman, V. J., The Law of Digital Resurrection (2024). B.C. L. Rev. (forthcoming 2025), http://dx.doi.org/10.2139/ssrn.4899324.

[13] Hutson, J., Huffman, P., & Ratican, J. (2023). Digital resurrection of historical figures: A case study on Mary Sibley through customized ChatGPT. *Metaverse, 4*(2), 1–13. https://doi.org/10.54517/m.v4i2.2424.

[14] Haller, E., & Rebedea, T. (2013). Designing a chat-bot that simulates an historical figure. In *Proceedings of the 2013 19th International Conference on Control Systems and Computer Science* (pp. 582-589). IEEE. https://doi.org/10.1109/CSCS.2013.85.

[15] UNESCO. (2021). *Recommendation on the Ethics of Artificial Intelligence.* Paris: UNESCO. [16] National Institute of Standards and Technology (NIST). (2023). *AI Risk Management Framework (AI RMF 1.0).* Gaithersburg, MD: U.S. Department of Commerce.

[17] European Union. (2024). *Artificial Intelligence Act.* Official Journal of the European Union. Available at: https://artificialintelligenceact.eu/the-act/ (accessed on November 7, 2025) [18] Puglia, S., Reed, J., & Rhodes, E. (2023). *Technical Guidelines for Digitizing Cultural Heritage Materials.* Federal Agencies Digital Guidelines Initiative (FADGI).

[19] International Organization for Standardization. (2023). *ISO/IEC 23894:2023 – Artificial Intelligence – Risk Management.* Available at: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:23894:ed-1:v1:en (accessed on November 7, 2025)

[20] Škobo, M., & Šović, M. (2025). The digital doppelgängers of Nikola Tesla and Branislav Nušić: A new approach to interactive learning and cultural heritage. In *Proceedings of the 12th International Scientific Conference Sinteza 2025* (pp. 411–417). Singidunum University. https://doi.org/10.15308/Sinteza-2025-411-417.

[21] Škobo, M., & Šović, M. (2025). Veštačka inteligencija u službi očuvanja srpskog književnog nasleđa: Primer Nušićevog četbota. In *Proceedings of the "Synergy" – 25th Scientific Conference with International Participation: Sust ainable Business Development – Steps to Success!* (pp. 106–113). Bijeljina: University Sinergija. eISSN: 2490-3825 [In Serbian]

Milena Šović PhD student, Faculty of Economics and Engineering Management, University Business Academy, Novi Sad, Serbia
Kontakt: milena.sovich@gmail.com
Oblasti interesovanja: artificial intelligence, mathematics, statistics, and data science

Dr Milena Škobo English Studies, Faculty of Philology, Sinergija University, Bijeljina, Bosnia and Herzegovina
Kontakt: mskobo@sinergija.edu.ba
Oblasti interesovanja: anglophone literature, AI in education, ecocriticism, teaching methodology