

REVIEW

from PROF. DR. VESSELINA VALKANOVA
Faculty of Journalism and Mass Communication
Sofia University "St. Kliment Ohridski"

for obtaining the educational and scientific degree "Doctor" in scientific
field 3.5. Social Communications and Information Sciences

with a dissertation on the topic:

"METHODS OF ARTIFICIAL INTELLIGENCE FOR COLLECTING, SYNTHESIZING,
PROCESSING AND PROVIDING INFORMATION IN JOURNALISM"

presented by VENTISLAV VENTISLAVOV VASSILEV, full-time doctoral
student in the Department "Press Journalism and Book Publishing" of
the Faculty of Journalism and Mass Communication

with supervisor: PROF. EFREM EFREMOV

PRESENTATION OF THE DOCTORAL STUDENT ON THE BASIS OF THE SUBMITTED
DOCUMENTATION

VENTISLAV VENTISLAVOV VASSILEV was enrolled as a full-time doctoral
student in the scientific specialty in the Department of Press Journalism and
Book Publishing on March 1, 2021 with scientific supervisor Prof. Dr. Efrem
Efremov. The colleague completed the activities on an individual basis,
successfully passed the exam in the specialty. The dissertation was discussed

in an extended constitution of the Department of Press Journalism and Book Publishing on February 28 and, based on two written reviews and a decision of the Department council, was directed to public defense.

Ventsislav Vassilev holds a bachelor's and master's degree in Journalism from Sofia University "St. Kliment Ohridski" – Faculty of Journalism and mass communication. He has impressive professional experience - for 13 years he has been an editor, later a senior editor of the Bulgarian National Radio website, he was an editor of DataNews.bg, a reporter at the BGNES news agency, and has held various journalistic, reporting and editorial positions.

DISSERTATION AND AUTHOR ABSTRACT INFORMATION

The dissertation "ARTIFICIAL INTELLIGENCE METHODS FOR COLLECTING, SYNTHESIZING, PROCESSING AND PROVIDING INFORMATION IN JOURNALISM" has a total volume of 206 pages, structured in a preface, three chapters, a conclusion, a bibliography of 149 titles, a reference to scientific contributions and a list of publications related to the topic of the dissertation.

On the topic of the dissertation, Ventsislav Vassilev has indicated his publications of four articles in scientific journals, collections and continuing editions with scientific review, including those indexed in world databases, participation with section reports in international conferences, thereby satisfying the requirements for communicating the results of scientific research for the PhD degree.

The abstract, attached to the defense documentation, is 24 pages long and presents the dissertation work through a description and analysis of: the relevance of the topic, the theoretical and practical need for the research, the motivation for its choice. The object and subject of the research are outlined, the main scientific problem and the leading research thesis are

formulated, as well as the verified hypotheses, goals, limitations, approach, methods, methodology, structure of the dissertation work, its content, contributions and generalizations.

The abstract is adequate to the dissertation, essentially reflects the structure, approach and main generalizations and meets the requirements for self-referencing of a dissertation work.

ASSESSMENT OF THE ACTUALITY OF THE PROBLEM

Regardless of the concerns and doubts of the media industry regarding the introduction of artificial intelligence, news media such as the New York Times, Associated Press, Washington Post, ESPN and Semafor, etc. are already investing in research and measures to incorporate technology into editorial activities and processes together with journalists, while respecting ethical and editorial standards¹.

The fear of job losses is accompanied by the birth of new jobs, for example, editors and senior editors for AI strategies and innovations, editorial and product strategists, and large media are increasingly actively hiring employees for such functions. Experimenting and observing the development of tools and processes for the introduction of generative artificial intelligence at all levels in the news media, creating agile teams working on ambitious news experiences with artificial intelligence, using AI to accelerate work in the editorial office and to deal with new challenges, while preserving its values and traditional standards, clearly emerges as one of the main tasks of media management in the new decade.

¹ Deck, Andrew. The Washington Post's first AI strategy editor talks LLMs in the newsroom. // NiemanLab, 28 March 2024, Available from: <https://www.niemanlab.org/2024/03/the-washington-posts-first-ai-strategy-editor-talks-llms-in-the-newsroom/>

It is about a new culture, a vision of the future, related not only to traditional machine-mediated activities in modern newsrooms such as: monitoring social media, managing large data sets used in news stories, analyzing audience engagement, etc., but to engaging the audience in a completely new type of news and a new type of news experience with more connections, patterns in data, multiple sources, converting stories for different channels and platforms. What processes and activities, in addition to the current machine-mediated activities – tagging, categorization, adding metadata, headline and SEO suggestions, editing copy, organizing research, permissions for processing and moderating comments, can be “entrusted” to AI – the news industry already has the answer – gathering and producing news, engaging audiences, creating streams of breaking news from multiple sources. Freeing journalists from routine activities allows them to focus on the application of natural intelligence to in-depth analytical and investigative journalism.

There remain issues related to intellectual property, accuracy, transparency, confidentiality, quality, factual inaccuracies, the presentation of facts out of context and the risk of disinformation, problems with safety, stability, interpretability, fraudulent fact-checking. There remains the problem of trust and transparency, bias and low quality, further leading to audience withdrawal from the news, and to increased control of technological platforms over the media.

The dissertation is dedicated to a topical topic – the experience and practices of the world media, artificial intelligence applications and their possibilities for use in the media. The author's motivation "to study the evolution, functioning and basic principles of building AI" is related both to the topicality of the scientific problem and to the presence of "blind spots" in the

use of AI (potential errors in automatic content generation, "information bubbles", risk of reinforcing disinformation).

EVALUATION OF THE CONTRIBUTIONS OF THE DISSERTATION

The dissertation formulates a specific research thesis and goals related to the scientific problem and to the study of the economic, professional, ethical and social consequences of using artificial intelligence to "automate news content".

To achieve the goals and tasks set, the doctoral student relies on a methodology that includes an INTERDISCIPLINARY APPROACH, "UNIVERSING TECHNOLOGICAL, LEGAL AND SOCIAL ASPECTS, ANALYZING EXISTING PRACTICES, THE REGULATORY FRAMEWORK AND POSSIBILITIES FOR INTEGRATION OF AI IN THE MEDIA", A THEORETICAL REVIEW AND ANALYSIS OF EMPIRICAL DATA.

In the first chapter of the dissertation "ARTIFICIAL INTELLIGENCE - DEFINITION AND DEVELOPMENT" the doctoral student undertakes the important theoretical review of the problem from the point of view of its history, level of research, presentation in sources, authors who have considered it. The main concepts are defined, through which the signs of the problem situation are described.

The dissertation consistently and systematically presents fundamental definitions, views and concepts that are key to the topic and object of the study – examining the evolution of the development of generative artificial intelligence, the main concepts and key stages in its development. The author conducts an in-depth analysis of the different levels of development and types of programming languages, as well as their applications in various fields. A special focus of the first chapter falls on the

classification of types of artificial intelligence, the legal and legislative framework and regulations of the European Union are analyzed.

This part clearly demonstrates the research capabilities and skills for scientific interpretation on the topic of the dissertation based on in-depth accumulations and broad knowledge of the research problem with its aspects, connections, and regularities.

The second chapter "TYPOLOGIZATION OF APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN THE MEDIA" is aimed at studying the most current processes, phenomena and developments in the development of technologies and the use of intelligent algorithms in modern editorial offices. The thoroughly researched sources on the topic are summarized, and contemporary applications of artificial intelligence are highlighted. The author examines technological and creative collaborations between humans and intelligent technologies, takes into account both the ethical challenges of using AI in the creation of journalistic content and the strong social impact of these processes, especially with regard to new generations.

Through examples, the author proves the degree of integration of AI into various journalistic processes and activities, demonstrates levels of process automation, and deduces algorithms for news generation, machine translation and decoding, data analysis in certain genres such as analytical and investigative journalism, and video and audio formats.

I find the summaries on the role of applications in the media for content personalization, fact-checking, combating disinformation, and moderating comments and user content particularly valuable.

Decisive for proving the theses are the results of a study in the third chapter of the dissertation "IMPLEMENTATION AND DEVELOPMENT OF ARTIFICIAL INTELLIGENCE IN THE MEDIA: CHALLENGES AROUND THE WORLD AND POSSIBLE SOLUTIONS FOR BULGARIA". Here the author summarizes the results of an

empirical study dedicated to the degree of use of AI in global and Bulgarian media practices. Benefits, challenges and risks of integrating applications in journalism and editorial activities are analyzed in depth.

A highly rated author's proposal for creating a technological solution and a conceptual model for a system assistant for optimizing the editorial process with an analysis of the processes of creating an application for data processing, prioritization of news and information and content management.

QUALITIES OF THE DISSERTATION PAPER

The work demonstrates very clearly the professional reflection of the doctoral student and his lasting interest in the research field to which he has dedicated himself.

The text is read with interest and ease, there is a pronounced analytical nature. The tasks of the study are precisely and specifically formulated, the scientific problem is stated in the preface, clear thesis and research tasks are formulated, the assumptions and questions made are examined and proven in the chapters. The parts are logically and meaningfully connected. The results obtained are described and analyzed comprehensively, the implementation of the tasks set is proven.

The dissertation represents a certain contribution to the researched field. The research and theses are original and authorial, the doctoral student has demonstrated a high level of critical thinking and original interpretations of the researched problem.

CONCLUSION

- With his review of the development and prospects for the integration of AI in the media and journalism;

- With the developed detailed classification of the types of artificial intelligence used in the media, according to their application;
- With the detailed analyses of the impact of AI on journalistic practice;
- With the comparative analysis between traditional journalistic methods and machine-supported editorial processes, including based on an experiment with radio broadcasts;
- With the conducted empirical study on the degree of use of AI technologies in the Bulgarian media sector;
- With the author's model for creating digital assistants in media practice;
- With the in-depth research on the communication and media environment and the impact of generative artificial intelligence on the media industry

the present dissertation work has a certain contribution to the research in public communications and information sciences, in media studies, digital communication.

I fully accept the author's assessment of the practical significance of the study, expressed in: derived guidelines for implementing AI in media organizations and optimizing work processes and improving the quality of journalistic content; in creating educational programs for future journalists, including work with AI technologies; introducing standards for transparency in the use of AI in journalistic practice; assisting media companies in developing strategies for balanced implementation of AI; assessing the social and economic effects of the use of AI.

The above contributing points of the research give me reasons to
SUPPORT BEFORE THE RESPECTED MEMBERS OF THE SCIENTIFIC JURY THE AWARD OF THE
EDUCATIONAL AND SCIENTIFIC DEGREE "DOCTOR" UNDER 3.5. PUBLIC
COMMUNICATIONS AND INFORMATION SCIENCES OF VENTSISLAV VENTSISLAVOV
VASSILEV FOR THE DISSERTATION ON THE TOPIC: ""METHODS OF ARTIFICIAL
INTELLIGENCE FOR COLLECTING, SYNTHESIZING, PROCESSING AND PROVIDING
INFORMATION IN JOURNALISM".

15.4.2025 г.

Prof. Dr. Vesselina Valkanova