Odessa Polytechnic National University, Kiev National University, T. Shevchenko, Kharkov National University of Radio Electronics, National Aviation University; Odessa National University, I.I. Mechnikov, Sumy State University, Admiral Makarov National University of Shipbuilding; Lodz Technical University, Azerbaijan State Oil Industry University.


# MATERIALS

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Збірник містить Матеріали, прийняті оргкомітетом до участі в Міжнародній науково - практичній конференції «ІНФОРМАЦІЙНІ УПРАВЛЯЮЧІ СИСТЕМИ І ТЕХНОЛОГІЇ» (ІУСТ-ОДЕСА-2023).

Наведені матеріали конференції охоплюють основні напрямки розвитку в області інформацйіонних систем управління; інтелектуальних систем і аналізу даннях; моделювання та розробки програм.

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The collection contains materials accepted by the organizing committee for participation in the International Scientific and Practical Conference "INFORMATION CONTROL SYSTEMS AND TECHNOLOGIES" (ICST-ODESSA-2023).

The materials of the conference cover the main directions of development in the field of artificial intelligence, development and analysis of big data, blockchain and crypto technologies, control systems in robotic systems, data security and cryptography, ICT in the network and administration, information systems and technologies in Data Mining, intelligent technologies management, mathematical modeling, methodology and didactics of teaching and using ICT, application development, project management. system analysis, software development.

Conference materials are presented in the following sections:

- Information control systems
- Intelligent systems and data analysis
- Modeling and software engineering

The conference materials were reproduced from the author's originals. The organizing committee of the conference expresses gratitude to all the participants of the conference and hopes for further fruitful cooperation

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# IMPLEMENTATION PECULIARITIES OF THE STRATEGY OF ARTIFICIAL INTELLIGENCE DEVELOPMENT IN UKRAINE

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# ОСОБЛИВОСТІ РЕАЛІЗАЦІЇ СТРАТЕГІЇ РОЗВИТКУ ШТУЧНОГО ІНТЕЛЕКТУ В УКРАЇНІ

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***Abstract.****This paper is devoted to the analysis of the specific focuses, directions, and peculiarities of the Strategy of Artificial Intelligence Development in Ukraine.*
***Keywords:*** *artificial intelligence, ChatGPT*

***Анотація.*** *Дана стаття присвячена аналізу конкретних фокусів, напрямків та особливостей Стратегії розвитку штучного інтелекту в Україні.*
***Ключові слова:*** *штучний інтелект, ChatGPT*

Artificial intelligence (AI) plays a more and more important role in the different fields of human activity.

Scientists and experts are expecting revolutionary results with AI development and implementation in medicine and healthcare, transportation, science, education, military and defense, manufacturing, agriculture, space exploration, and different services [1].

This paper is devoted to the analysis of the specific focuses, directions, and peculiarities of the Strategy of Artificial Intelligence (AI) Development in Ukraine (AIDU Strategy).

The main paper's components are:

- an analysis of the current state of the justification, development, and governmental approval of the National Strategy of AI in Ukraine;
- key elements and main priority areas of AI implementation according to the Institute of Artificial Intelligence Problems's (IAIP) project "Strategy for AI Development in Ukraine" [2];
- proposals for AI development in short- and long-term perspectives and features of the AI implementation in Ukraine during the current wartime.

Special attention is paid to such focuses in AI research and development as:

(a) the design of AI systems based on conscience conceptions;

(b) new solutions in intelligent robotic systems for ground, underwater and aerial applications;

(c) AI perspectives in the marine industry;

(d) prospective AI implementation in education;

(e) linguistic competency of AI systems.

This paper aims to the analysis of the main focuses of the AIDU strategy. It is very important for consolidation and concentration of the research efforts for implementing AI in priority areas.

The main peculiarities of the developed AIDU Strategy, priorities in AI implementation, and prospective research directions in the AI field are focused on and discussed in detail.

The result of the "Strategy for AI Development in Ukraine" implementation should be dealt with the creation of breakthrough technologies in the field of computer science and artificial intelligence as well as the creation of conscious AI-powered computers that make decisions considering ethical, moral, and legal norms.

At the next step, future research must be dealt with software and hardware development, testing and implementation of proposed new-generation intelligent systems with AI based on the conscience conception.

Another important direction is the development of linguistic technologies, particularly those providing semantic text analysis that manifest the emergence of linguistic competency of an artificial personality.

Besides, the authors analyzed and underlined the most important fields for AI implementation in Ukraine, as well as, developed, formalized and

justified priority practical-research directions for future successful AI results and achievements, in particular:

- five main directions in intelligent robotics [3] based on application of large language models (LLMs), Augmenated Reality (AR) technology and others;
- two main directions in the marine industry based on increasing efficiency of AI-based ship safety monitoring systems which involve AI algorithms and advanced digital sensors [4] to detect and analyze potential hazards in real-time operations, using Digital Twins technology and others;
- six main directions in the education sphere based on LLMs ChatGPT and GPT-4 application, as well as, the efficiency of training students in the AI field at the university level may be significantly increased in the framework of specialized integrated education environments [5] such as multi-university (academic) consortia and academic-industry consortia.

Scientific efforts must be concentrated on intensive AI research in the abovementioned directions to increase the role of Ukraine in the world as a high-technological country, strong marine country and country with high-caliber standards in education.

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