

DISCUSSIONS AND STUDIES ABOUT ARTIFICIAL INTELLIGENCE (AI) & SPEECH

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<https://doi.org/10.5281/zenodo.13135649>**Abstract**

The purpose of this article is to present the connection between artificial intelligence and linguistics. We have explained the term artificial intelligence, presented neologism and also referred to various digital tools that are used by Armenian students.

Keywords: artificial intelligence, speech culture, neologism, digital tools, ChatGPT

It is obvious that nowadays the linguistic textualization of any reality can be provided by the direct application of **IT** and **ICT** (information and communications technologies) technologies. Due to this process, we emphasize the development of language policy, linguistic civilization and patterns of artificial intelligence. The creation of linguistic models should be based on the scientific law.

Artificial Intelligence is a unique science of making machines do things, activities that would require intelligence if done by man. Linguists discuss **speech understanding** (voice recognition system), which enables a system to understand spoken input from a microphone and respond back correctly. As of today, there are several different types of Speech Understanding systems. Speech recognition software may be so popular because it is easier for us to speak than to type [1, 441]. The following requirements for language and speech become essential in connection with the examination of the issue: accuracy of language, language selection (Armenian, Russian, English, German and so on), sequence of questions, answers, prompts, possibility of choice, style, speech duration (expressive and emotional speech, long phrases and words, pauses, efforts (e.g. breathing, grunting, crying)), format (written, spoken). Digital speech has a dialogic form, it is never monologue. The monologue is presented as inner speech.

The first work that is now generally recognized as AI was done by Warren McCulloch and Walter Pitts [2, 16]. They drew on sources, especially knowledge of the basic physiology and function of neurons in the brain. The term **artificial intelligence** was coined in 1956, but AI has become more popular today. In the 1960s, the US Department of Defense took interest in this type of work and began training computers to mimic basic human reasoning [6]. The Bible and Grigor Narekatsi's works contain important information about **ԲԱՆ** (artificial intelligence in Armenian՝ *արհեստական բանականություն*). In the primary sources it is equivalent to thought, speech, language. Here's a passage in Old Armenian: «Բան ոչ է բարբառ լեզույս, այլ խոկումն մտաց». By the way, Artificial intelligence has enriched the language with many neologism: *ռոբոտաշինություն, մեքենայական ուսուցում, մեքենայական ուսուցման գրադարաններ, խելացի տուն, քաղաք, սմարթֆոն, կենդանի խոսակից, չատբոտ* and so on.

Recently, an Artificial intelligence laboratory was established at **Yerevan State University**, where many students are now involved in research projects. The laboratory has designed its research agenda planning to work on some problems of technological nature, as well as develop theoretical and algorithmic aspects of machine learning. Students are very interested in this science, they use digital tools.



Yerevan State University, Artificial Intelligence (AI) laboratory

Based on our surveys, we can say that students often use **ChatGPT**, **Dall·E**, **AIVA**, **Google Map**, **Lmsys**. Let's introduce some of them: **ChatGPT** is free to use, it is an artificial intelligence (AI) chatbot, the language model can respond to questions and compose various written content. Students have used ChatGPT to do the following: compose music, summarize articles, podcasts or presentations, create titles for articles, create articles, blog posts and quizzes for websites, script social media posts, solve math problems, write video scripts, play games and so on. However, it should be noted that ChatGPT has limited knowledge of world and may also occasionally produce harmful instructions or biased content. Unfortunately, students do not pay attention to this fact. **DALL·E** enables text-to-image creation. It can understand and interpret written prompts by retrieving images and used especially by university students interested in design. It is noteworthy that **AIVA** is the first artificial intelligence in the world to receive the status of a songwriter, has copyright. With this tool, students have the opportunity to create music for movies, commercials, games and so on. **AIVA** has attracted students interested in art. Students living in the regions actively use **Google Map**, which allows to see traffic jams, offers street views. **Lmsys** is new for students. Chatbot Arena is a crowdsourced open platform for LLM evals and it is dependent on community participation. This digital tool provides limited safety measures and may generate offensive

content. It must not be used for any illegal, harmful, violent, racist, or sexual purposes [7]. Students are advised not to upload any private information. The service collects user dialogue data, including both text and images, and reserves the right to distribute it under a Creative Commons Attribution (CC-BY) or a similar license.

In conclusion, as of today, Speech Understanding systems are in high demand and research on it is being done worldwide. It is necessary to get the right orientation when using digital tools.

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