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## ОБЗОР НЕЙРОСЕТЕВЫХ ГОЛОСОВЫХ ПОМОЩНИКОВ ДЛЯ ОБУЧЕНИЯ СТУДЕНТОВ РАЗГОВОРНОМУ АНГЛИЙСКОМУ ЯЗЫКУ

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## THE REVIEW OF NEURAL NETWORK VOICE ASSISTANTS FOR TEACHING STUDENTS SPOKEN ENGLISH

### Introduction

Neural networks are gaining popularity among Internet users. For instance, the visit of the Chat-GPT assistant from Open AI amounted to more than 100 million people within a week in 2023 [1]. Neural networks are constantly improving, their algorithms are developing and changing. We can assume that humanity is entering a new era, where neural networks gradually become indispensable personal assistants in daily life. Consequently, the relevance of the study is justified by the continuous and rapid development of artificial intelligence technologies.

Neural networks can significantly simplify human life. They are able to find logically correct information, structure responses, provide advice or support users. Neural networks are especially relevant for school and university students, as they efficiently find the necessary answers to questions that students cannot find individually on the Internet. According to Stephen Duggan, neural networks can already develop a personalized educational "trajectory" for students. Furthermore, they can influence a child's emotional and social development, by fostering the so-called "soft" skills essential for communication in the 21st century. [2]

We conducted a survey among students from the Department of Linguistic Education of the IUES SFEDU to determine their awareness of neural networks that assist in learning spoken English. Nearly two thirds of respondents are aware of the existence of such neural networks (59%), some of them (13%) are actively using them. Moreover, 53% of respondents stated their willingness in engaging in speaking English with a neural network chatbot.

Based on the above results, we intend to explore neural networks that will help students improve their spoken English skills and provide a review of well-known neural network chatbots.

### The review of neural network voice assistants

1. **Chat GPT** is a versatile assistant that generates responses based on user prompts (request). The voice assistant feature has been added to the mobile application, however, it is currently unavailable for download.

- 2. **Pi** is a personal assistant capable of supporting any topic suggested by the user. It operates in English and offers a voice via the mobile application.
- 3. **Character AI** is a neural network that provides an opportunity to communicate with models of celebrities and fictional characters. Users can create a character or communicate with pre-existing ones, including through voice chat.
- 4. **Gliglish** is a trained neural network capable of simulating role of a teacher and a student or recreating a conversation from real life.
- 5. **Twee** is an assistant that generates topic-specific questions and provides exercises on diverse aspects of the language to help users improve their knowledge. It operates in English.
- 6. **SmallTalk2Me** is a neural network that aids in improving English language skills and assesses its proficiency level. The neural network includes a list of topics users can discuss with a chatbot.

As an example of assessing the level of proficiency in a foreign language, we decided to test the SmallTalk2Me neural network. After registering on the website, user gain access to a language proficiency test. Below is a sample list of questions.

- 1. What is your favorite food? Do you have best friends? How would you describe yourself as a friend?
- 2. Read the text.
- 3. Describe the picture and answer the questions.
- 4. Share your best travel experience and answer the related questions.

We recorded the answer on behalf of the student, and the neural network suggested corrections to her sentences (Table).

Table

Sentences from the student and the neural voice assistant

Original sentences from a student	Rephrased sentences from SmallTalk2Me
I will never hurt someone I love.	I could never hurt someone I care about.
There is no something special about this.	There's nothing particularly special about this.
Okay, this photo was made when I was sitting near the window and asked my boyfriend to take the photo.	This photo was taken by my boyfriend while I was sitting by the window.
And this experience was exciting because I met my relatives and best friends.	The experience was thrilling because I reunited with relatives and close friends.

Results

Voice-based neural network assistants are an innovative technology that can vary the approach to learning foreign languages. However, in this research generative transformers have both strengths and limitations. The key strengths include

rapid query processing, the ability to generate diverse conversation topics, standardized assessment of the speaker's language proficiency and the availability to being online at any time. Alternatively, key limitations include the occasional inaccuracies or distortion in responses, a limited number of free interactions, and subscription fees after a trial period.

After 15 minutes of conversation, the neural network assessed the speaker's proficiency level as B2+. In addition, it offered recommendations for its improvement through free speaking modules, highlighted commonly used words and replaced them with synonyms. Furthermore, the neural network provided frequently used words by the user and advised on enhancing spoken language skills.

In 2024, numerous neural networks that are already available to evaluate and facilitate foreign language learning. For instance, the Higher School of Economics has released its beta-version neural network AI-Lingvo, helping to determine the level of language proficiency [3]. The tendency to use neural networks is expected to grow annually, and as educators and researchers, our responsibility is to investigate neural networks as tools for addressing communication problems.

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