MODELING LLM BASED LISTENING COMPREHENSION TOOLKIT FOR FOREIGN LANGUAGE ACQUISITION

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The usage of AI, namely ChatGPT [1,2], has recently become a relevant topic among educators. This research presents a Large Language Model based listening comprehension toolkit implemented within the scope of Scientific and Methodological Laboratory at Business Foreign Languages and Translation Department in NTU "KhPI" as an effective set of tools for improving listening skills among ESL students. This LLM based listening toolkit incorporates such AI-based browser extensions and applications as Speechify, Murf, ElevenLabs, Otter and an AI assistant "Talk to Mia". The former three tools generate lifelike speech in any language and voice with a text-to-speech (TTS) technology. The latter two tools are based on speech-to-text (STT) technology. These tools help students to develop listening comprehension in situational dialogues, improve pronunciation, and master appropriate intonation.

Speechify can read a foreign language text aloud for an ESL student and uses a computer-generated text-to-speech voice. Another application is Murf AI offers a virtual studio where any text can be transformed into speech and listened to by ESL students. There are more than 120 modes of professional voices available. ElevenLabs is also an AI voice generator which uses TTS technology and renders human intonation and inflections adjusting the delivery based on context. Otter AI application joins conference platforms, automatically records, transcribes, captures slides, and generates summaries in real time. The ability of Otter AI to convert audio or video into a text significantly helps students to recognize words and look up unknown words and expressions in the dictionary. An AI assistant "Talk to Mia" asks questions and a student responds by practicing listening comprehension in such a way. In our research, we expand on sets of exercises accompanied by these AI tools, give examples of usage and share the findings in terms of efficiency.

To conclude, this LLM based listening comprehension toolkit is based on speech synthesis which works by installing applications either on a device or as a browser extension. In addition, the AI ability to scan the words on the page and read it out loud, and to change accents, languages, the default voice to a custom voice, and even increase or decrease the speaking rate enables ESL students to listen to any printed text they deal with. Thus, both speech synthesis TTS and STT technologies improve students' listening comprehension skills dramatically.

References:

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