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Transcription Platforms: A Comparative Analysis of AI-Assisted Tools

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Aim

We aim to recommend a transcription platform that eliminates the need for 3rd party data sharing, aligned with healthcare industry data security standards, to ensure privacy preservation of patient information.

Background and Hypothesis

The integration of artificial intelligence (AI) into the continuum of health professions education research and clinical practice has enhanced the efficiency and quality of learning and training. Recent advances in large language models brought about substantial improvement in audio transcription, a traditionally manual and time-consuming process that impacts the efficiency and quality of research studies and clinical practice. Accurate transcriptions are vital for data integrity and reliability, but data security issues remain a concern.

Methods

We compared readily available AI-assisted transcription tools TurboScribe, Otter.ai, Transcribe, and Whisper by Open.AI on the following aspects: data security, speed, cost, and accuracy. We transcribed a 3:11 minute audio clip that was extracted from a YouTube video uploaded by a public healthcare institution, featuring an interview with a local patient volunteer speaking colloquial English, on the three platforms¹.

Results

While all platforms may be accessed at no cost or with limited transcripts daily, Whisper and Turboscribe provided greater accuracy in results compared to Otter.ai. Otter.ai omitted several discourse markers and replaced auxiliary verbs erroneously, and generally captures nouns and adjectives that are enunciated clearly. All platforms removed filler words and were limited in punctuation accuracy.

Aspects	Turboscribe	Whisper	Otter.ai
Encrypted transfer	In transit: Yes At rest: Yes	In transit: NA At rest: Depends on laptop configuration; Institution laptops encrypt all data on the hard disk.	In transit: Yes At rest: Yes
Data shared with 3rd parties	TurboScribe staff has access to content uploaded, but no explicit terms in user agreement on the rules governing such access.	Not possible. Data does not leave computer	No guarantee of privacy in user agreement (point 9.7, retrieved on 26 July 2024)
Cost	3 free transcriptions per day, 30 minutes per file.	Free, no duration restrictions.	Free 300 minutes per month, 30 minutes per file.
Speed: Time to transcribe and receive results	<10 seconds	>10 seconds (depending on laptop processor)	<10 seconds
Accuracy	Filler words (e.g. uh) and discourse markers (e.g. also) removed. Some auxiliary verbs replaced erroneously.	Filler words and discourse markers removed. Some auxiliary verbs replaced.	Filler words and discourse markers removed. Auxiliary verbs (will, are) missing/replaced erroneously. Punctuation missing/inaccurate.

Discussion & Conclusion

In all, the use of Whisper by Open.AI for onsite transcription offers noteworthy benefits as it preserves privacy, since no data needs to be shared with third parties. The high level of security and accuracy of the transcription is especially crucial for healthcare institutions. The speed of transcription is however dependent on the processing power of the computer. Future research is needed on LLM on their ability to analyze qualitative research methods based on different epistemological approaches.

¹Tan Tock Seng Hospital. (2011, December 2). Cardiac Rehabilitation Support Group [Video]. YouTube. <https://www.youtube.com/watch?v=iuCTdEFR0gs>