Praanscribe: A Semi-Automatic, AI Powered Segmentation Tool for Praat

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Praat (Borsema & Weenink, 2025) is widely used open-source software for speech analysis and synthesis, particularly in phonetics and linguistics. It employs .TextGrid files for segmenting and marking speech, enabling further analysis of audio data. While segmentation can be done manually, automated tools like *EasyAlign* (Goldman, 2011) have been developed to streamline this process. EasyAlign requires a preexisting transcript to align speech with text automatically. However, this dependency poses challenges for studies focusing on spontaneous or natural speech, where transcripts may not be readily available. To address this limitation, Praanscribe has been developed as a semi-automated segmentation tool that generates .TextGrid files for Praat without the need for pre-aligned text. By utilising OpenAI's automatic speech recognition system Whisper AI, Praanscribe detects speech and silence in audio recordings in the 99 languages supported and automatically creates segmentation tiers based on user-defined parameters such as the number of layers and intervals. The tool can segment sentences and words individually. This functionality makes it particularly advantageous for sociolinguistic and descriptive studies prioritising natural speech over scripted transcriptions. Praanscribe is an open-source application written in Python (Van Rossum & Drake, 1995) and licensed under the MIT license, ensuring flexibility for researchers and developers. Its source code is publicly available on GitHub and is actively maintained and updated. By eliminating the need for pre-existing text alignment, Praanscribe simplifies research workflows, enhances efficiency, and expands the possibilities for studying unstructured or spontaneous speech data.

Keywords: Automatic speech segmentation, Praat, Whisper AI, phonetics.

References

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