

Automated Segmentation Exercises with PATKIT

Pertti Palo

2,3,5 June 2025

Land acknowledgement

The University of Alberta, its buildings, labs and research stations are primarily located on the territory of the Nêhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/Saulteaux), lands that are now known as part of Treaties 6, 7 and 8 and homeland of the Métis. The University of Alberta respects the sovereignty, lands, histories, languages, knowledge systems and cultures of all First Nations, Métis and Inuit nations.

In addition to our university's written land acknowledgement I'd like to speak of my own relation to the lands where I have been working for almost a year now.

Outline

- ▶ Land acknowledgement
- ▶ This slide
- ▶ Introduction: The what and the why
- ▶ Method: The how
- ▶ Demo
- ▶ Want to have a go yourself?
- ▶ MaTiPSS ad
- ▶ Thanks and references

Introduction: The what and the why

- ▶ Segmentation can be explained, but actually getting good at it requires hands-on practice.
- ▶ While Praat (Boersma and Weenink 2010) has an excellent segmentation interface, it does not provide a segmentation exercise interface.
- ▶ PATKIT (Palo et al. 2025) copies Praat's segmentation interface and adds a resettable exercise feature.

Method: The how – Setting up

- ▶ Open a directory with matching TextGrids and audio files in PATKIT.
- ▶ Go to: Exercises → Scramble TextGrids.
- ▶ If setting up for others, go to: Exercises → Save as exercise . . . , to save the audio files and the scrambled TextGrids in a new location.

Method: The how – Running an exercise

- ▶ Either do the setup steps or get an exercise dataset from someone.
- ▶ If you want to compare your segmentation with the model, you'll need to get the model files too.
- ▶ Do the segmentation.
- ▶ Check how you are doing by going to: Exercises → Compare to model.
- ▶ Rinse and repeat.

Demo - seeing is believing

Want to have a go yourself?

Installation instructions

► ??

MaTiPSS ad

Methods and Techniques in Phonetics of Signing and Speech

- ▶ Abstract deadline end of June.
- ▶ Results by beginning of August.
- ▶ Conference 17-19 October, University of Alberta, Edmonton, Alberta, Canada.
- ▶ **[link here]**
- ▶ Canadian Acoustics Week happenst to be in neighbouring Calgary 15-17 October.
- ▶ **[link to that one]**
- ▶ Banff happens to be very close by too. . .

Thank you!

References

- Boersma, P. and Weenink, D. (2010). Praat: Doing phonetics by computer [Computer program]. Version 5.1.44, retrieved 4 October 2010 from <http://www.praat.org/>.
- Palo, P., Moisik, S. R., and Faytak, M. (2025). PATKIT: Phonetic Analysis ToolKIT [Python software package]. Available in a public software repository, accessed 8 February 2025. <https://github.com/giuthas/patkit>.