

“Watch me Speak!”

Interactive Storytelling using Read-Along Studio

ICLDC8 Workshop Proposal

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Abstract Summary (50 words)

This workshop will guide participants through the process of using ReadAlong Studio to build an interactive ‘read-along’, that highlights words as they are spoken and replays them when clicked. Participants will leave with their own read-along and should bring an audio file, transcription, and accompanying permissions for using their data.

1 Abstract (400 words)

Interactive ‘read-alongs’, that highlight words as they are spoken and replay them when clicked (see Figure 1), are often well liked by both students and teachers. Language learners are able to interact with these multi-modal text/audio documents by repeating the pronunciation of specific words, pausing at a specific place in the document, and following along visually as the text is spoken.

Atikamekw Story

source: <https://atikamekw.atlas-ling.ca/lecture-audio/nikikw/>



Figure 1: An example ‘read-along’ for Atikamekw published on the Atikamekw language resource website: <https://www.lingueatikamekw.ca/lecture-audio/nikikw/>

Despite being useful educational tools, creating read-alongs through manual annotation is highly labour intensive and requires experience with specialized software such as ELAN or Audacity. However, this process can be mostly automated using speech recognition technology. This workshop will guide participants through the process of building an interactive read-along for their language using the free, open-source, ReadAlong Studio software developed by the workshop facilitators (Littell et al., 2022). Participants will leave with their own offline-compatible, single-file interactive read-along and should bring a computer, audio file (ideally two minutes or less), transcription, and any accompanying permissions or licenses for them to use their data, if necessary.

Mindful of how access and control of data is central to responsibly developing language revitalization technology, ReadAlong Studio was built with a data privacy policy that affirms community data sovereignty efforts and does not require participants to upload their audio anywhere. All audio will remain on the computer that participants bring; text will be sent over a secure connection for pre-processing, but will not be saved or used for any other purpose than building the ‘read-along’ in question.

Many language technologies require users to be proficient in skills that are not part of the standard language teacher’s repertoire, such as coding. In addition to affirming data sovereignty and community control over *data*, we believe that centering justice in the context of Indigenous language technology also involves ensuring community stakeholders have control over the *development* of their language technologies (see Brinklow, 2021). Accordingly, ReadAlong Studio is a platform for users to create their own read-alongs and does not require participants to use any code or install anything on their computers.

Following the main workshop session, breakout rooms will guide participants through some of the extra features of ReadAlong Studio, such as adding visual content to read-alongs, exporting to other formats like TextGrid, ELAN, and subtitle formats, as well as publishing the read-along on the web.

References

- Brinklow, N. T. (2021). Indigenous language technologies: Anti-colonial oases in a colonizing (digital) world. *WINHEC: International Journal of Indigenous Education Scholarship*, (1), 239–266.
- Littell, P., Joanis, E., Pine, A., Tessier, M., Huggins-Daines, D., & Torkornoo, D. (2022). ReadAlong Studio: Practical Zero-Shot Text-Speech Alignment for Indigenous Language Audiobooks. *Proceedings of SIGUL2022 @LREC2022*, 23–32.

2 Biographies

Aidan Pine

Hello! My name is Aidan Pine. I'm a settler of European ancestry born in Victoria, B.C, Canada.

I am a researcher working on the Indigenous Language Technology project at the National Research Council of Canada (NRC), and I fell in love with language revitalization work as a way of combining my interests in language, linguistics, anti-colonial/decolonial methodologies, and computer science.

I am really excited to share ReadAlong Studio and to see all the read-alongs everybody will make!

David Huggins-Daines

Hi! I'm David, originally from Calgary, Alberta, Canada, but I've wandered around a bit since and ended up in a small town north of Montreal, where I am an elected city councillor. Previously, I worked for many years in industry on automatic speech recognition, question answering, and other natural language processing technologies.

It has been said that learning, speaking, writing, and teaching a language is a political act, but it is also a profoundly human one. My goal is to make simple, useful technologies that empower as many people to do this for as many languages as possible.

Eric Joanis

Bonjour! My name is Eric Joanis. I am a computational linguist and software developer at the NRC. I have spent most of my career working on statistical machine translation, but shifted in recent years to supporting projects in the area of Indigenous language revitalization. I am interested in applying my software development expertise to projects that are anchored in community needs and making them robust, stable and well documented, as well as contributing to their core feature development.

Patrick Littell

Hello; my name is Patrick Littell; I'm a researcher at the National Research Council of Canada in Ottawa, ON. I concentrate on lowering the prerequisites (in terms of both data and expertise) for language technology development, so that more people can make practical real-world technologies for their languages.

Marc Tessier

Bonjour / Hi, I'm Marc Tessier. I was born in Chilliwack BC. and lived in many Canadian provinces and territories in my younger years. I now live in

the National Capital Region. Throughout my career now at NRC, I have been working with, supported and developed various language technology tools.

Delasie Torkornoo

Hello! My name is Delasie (Del) Torkornoo . I am originally from Ghana. I am the technical director for the Algonquian Dictionaries and Language Resources Project (<https://www.algonquianlanguages.ca>). I have a passion for developing, adapting and promoting digital infrastructure for community focused language projects. I enjoy building tools to simplify and support the processes of language documentation and dissemination at the community level.