

Sensing the Alice Holt Forest

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1 Program Notes

This data-driven live coding performance explores natural soundscape recordings from the Alice Holt Forest, UK, captured continuously over the course of a year via a custom-built audio streamer. The central enquiry is whether patterns in forest soundscapes can be linked to climate change, using acoustic ecology and live coding to highlight their interconnection. Are species' sounds diminishing? Do environmental noises dominate? Are there other acoustic markers tied to climate shifts? The performance uses MIRLca, a self-developed SuperCollider extension that combines AI and music information retrieval (MIR) techniques to retrieve and manipulate sounds from Freesound in real time.



Fig. 1. Screenshot of the Sensing the Alice Holt Forest live-coding session.

2 Project Description

Our vision is to emphasise listening as a method to engage with the forest ecosystem. Connecting people to the forests through soundscapes has the potential to foster emotional and intellectual engagement with environmental issues. The use of off-grid technologies to record the source sounds also makes a point as a model of sustainability for data-driven artistic interventions. From this performance, we hope that the NIME community, live-coding community and general public will

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be curious about the *Sensing the Forest* project¹ and explore their resources and artistic outcomes for potential inspiration. Both audio recordings and the DIY audio streamers technology are openly accessible for others to adapt and use.

3 Technical Notes

- Projection needs : HDMI (1 screen).
- Audio output: XLR stereo.
- One table (2 metres x 1 metre aprox) and depending on the height of the table, one chair.
- A strong Wi-Fi network if possible. The performance relies on an internet connection.
- A power strip next to the table.

4 Media Links

This solo performance has been already presented in two venues: Sala Beckett, 9th International Conference on Live Coding (ICLC2025), Barcelona, Spain (May 29, 2025) and the Espace de projection, Web Audio Conference 2025 (WAC2025), IRCAM/Mozilla, Paris, France (November 19, 2025).

- ICLC2025 performance video: <https://iclc.toplap.org/2025/catalogue/performance/sensing-the-alice-holt-forest.html>
- WAC2025 performance video: <https://medias.ircam.fr/fr/media/7e0777e073adecc86766>

5 Ethical Standards

This work relates to the author's own creative practice and uses technology and media files developed as part of the research project "Sensing the Forest: Let the Forest Speak using the Internet of Things, Acoustic Ecology, and Creative AI" funded by the UKRI Arts and Humanities Research Council (AH/X011585/2). The project was approved by the Queen Mary University of London Ethics Committee, reference number QMERC20.565.DSEEC24.030. The custom-built audio streamer was built using the most eco-friendly materials that were reasonably found and were installed in the forest for one year in the least intrusive possible way, following the advice of the land managers and the ecology specialist. The sound recordings are publicly available under a CC0 licence.^{2,3} The code of the custom-made live-coding environment is publicly available as open source under a BSD 3-Clause License.⁴

¹<https://sensingtheforest.github.io>

²<https://freesound.org/people/sensingtheforest/packs/42937/>

³<https://freesound.org/people/sensingtheforest/packs/43504/>

⁴<https://github.com/sensingtheforest/custom-live-coding-env>