

Oregon State University
Cascades

Audio Annotation Tool

Capstone Project 2026–2027

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soundbendor lab

Motivation

The **Soundbendor Lab** is a research group in EECS at OSU.

Our interdisciplinary research focuses on a computational understanding of sound and music using artificial intelligence and deep-learning.

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Machine learning models require high-quality labeled sound data.

Need for Labeled Datasets

Collecting annotated data is:

- slow
- time-consuming
- difficult
- expensive

Proposed Tool

Audio **U**nderstanding and **R**esearch **A**nnotation (AURA) tool

- flexible framework for annotating audio datasets
- user mode (participant)
  - display and play audio files
  - label audio with annotation
  - incentivize use / gamification
- researcher mode (admin)
  - manage studies
  - upload audio files
  - create label sets
  - set tagging mode
  - generate analytics
  - download dataset

Annotation Modes

Name	Description
Best Match	Choose one
Pick All	Choose multiple
Compare Two	Best of two
Opposites	Best of two
Strength	1D slider
Circumplex	2D grid
Forced Match	Matching
Temporal	Over time



Minimum Viable Product

- develop a modern web application
  - interactive web front-end
  - robust back-end
  - cloud-based database
- add, remove, manage users and studies
- visualize analytics and statistics
- deploy and test the prototype
- validate prototype with a small study

QUESTIONS?