



# Singing Data Labeling Tool Plan

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# Goal and Motivation

We aim to develop an integrated and user friendly interface and set of tools that help with labeling singing data for machine learning purposes.

Current tools have the following issues:

- Not one tool does all tasks
- Their interface is not user friendly
- There is a lot of manual work



# Our Approach

- Allow for labeling features (Phonemes, Syllables, Notes, etc.) with convenience features
  - New shortcuts
  - Fluid navigation
  - Informative display
- Automated tools to allow extrapolation between features
  - Music score+Lyrics to Syllables and Phonemes
  - Phonemes to Syllables and Notes
- Tools for automatically aligning/time marking location of phonemes
- Ability to configure custom outputs
  - Preconfigured output for the hts singing label format



# Technical Challenges

- The HTS Singing Label format is a complicated output format to cover
- Finding and integrating, possibly developing, a tool for phoneme alignment that operates cross platform will prove challenging
- We are not experienced UI designers/programmers



# Milestone 1

October 4th

- Compare, select, and create “hello world” examples of tools for phoneme alignment, parsing for dynamic output, and graphics library
- Compare and select collaboration tools for software development, documents/presentations, communication, task calendar
- Resolve technical challenges that are presented
- Create Requirement Document
- Create Design Document
- Create Test Plan



## Milestone 2

- Implement, test, and demo the initial state of interface, phoneme alignment, UI, intermediate data structures, and saving/restoring data

November 1st



## Milestone 3

November 29th

- Integrate, test, and demonstrate the user interface's ability to use the intermediate data structures
- Implement spectrogram and graph elements
- Allow for inputting, saving, and restoring feature layers and labels



# Task Matrix For Milestone 1

Task	Carlos	Nandith	Avinash
Compare and select Technical Tools	GUI	Parsers Phoneme Alignment	Phoneme Alignment
"hello world" demos	GUI	Parser	Phoneme Alignment
Resolve Technical Challenges	GUI layout planning	Algorithm and tool for parsing and generating output format.	Selecting tool and making datasets as needed
Compare and select Collaboration Tools	Version Control	Documents and presentations	communication, task calendar
Requirement Document	write 25%	write 25%	write 50%
Design Document	write 34%	write 33%	write 33%
Test Plan	write 25%	write 50%	write 25%