

DoEarMi - Musical Ear Training App

Cole Behrndt, Daniel Wertz, Matthew Mitchell, Raleigh Hansen

Overview

Initial Goals

- Create an app for identifying scale degrees
- Enable musicians to improve listening and composition skills
- Construct the app to encourage ear training practice
- Address areas of improvement for similar apps

Need Finding

Methods

- Survey potential users to understand their needs
- Research existing apps for design implications

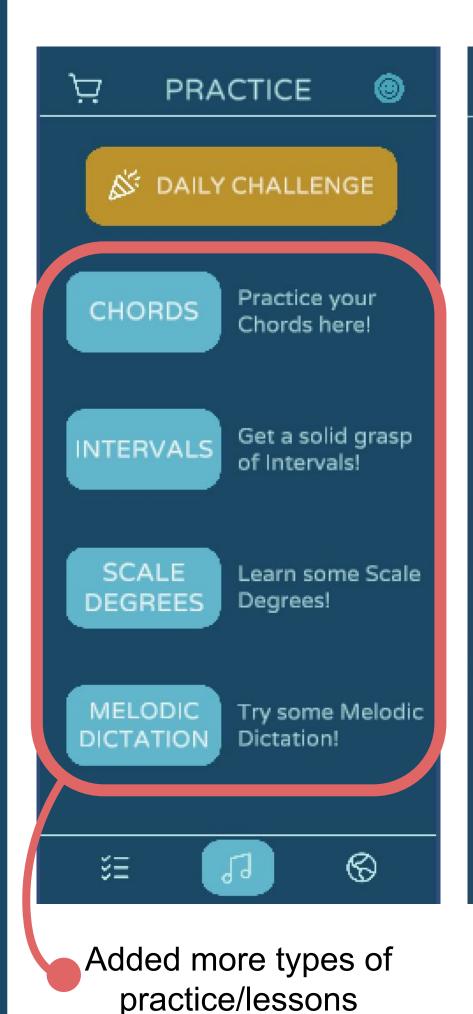
Observations

- Users desired ear training beyond initial intended features
- Most users were
- Intervals Scale-Degrees beginner musicians
- Existing apps were difficult for beginners
- Existing apps had limited game aspects and audio options

Revised Goals

- Help musicians identify chords, intervals, scale degrees, and melodic dictation by ear
- Make easy for beginners to understand and use
- Make free to use
- Include gamified aspects
- Include multiple instruments for ear training
- Add feedback for practice and user statistics

Implementation



SHOP

Owned

. .

2x XP

Audible feedback was

added for instruments

before purchase

9 100 **9** 100

1 Hour

Profile Icons

Instruments

XP Boosters

Streak

€ 100

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990

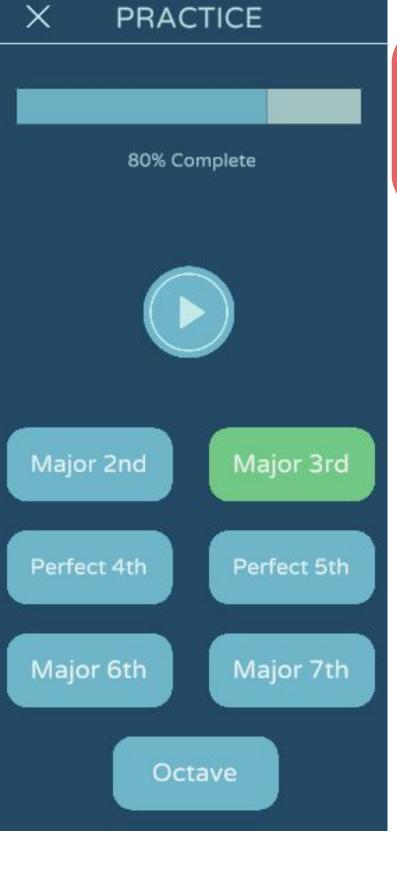
Owned

(PP)

500 XP

Do

Fa



PRACTICE

Results

Accuracy: 1/1 (NA)

Accuracy: 1/1 (10%)

Exit

XP gained: 1000XP

Currency earned: 100

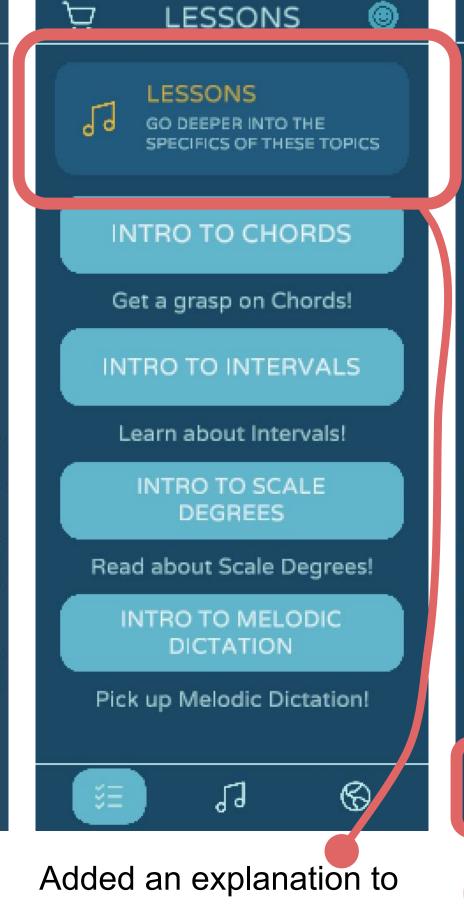
A results window gives

feedback to the user

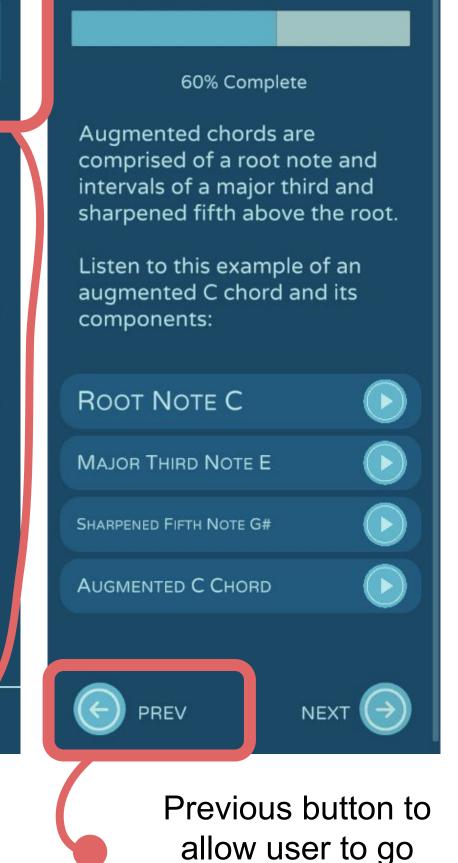
immediately after finishing

practice

Retry



separate lessons and practice

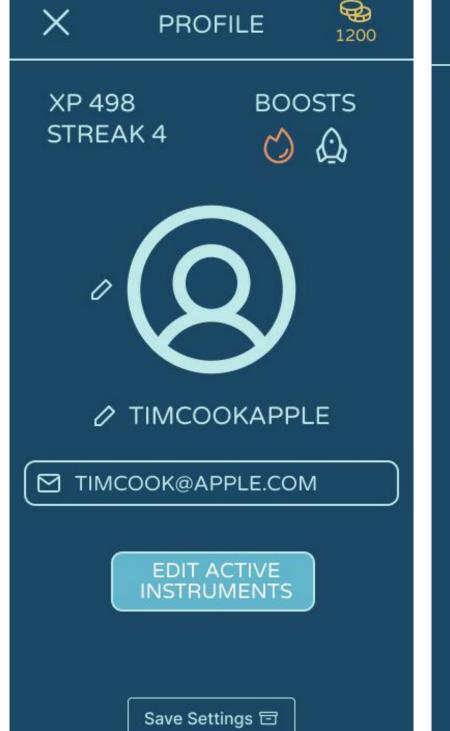


back and review

PROFILE

SHRIMPACE

X INTRO TO CHORDS



Delete My Account 🗓





The profile and settings pages were separated to show more statistics and hide unneeded clutter.

Reflection

HCI Challenges

- Keeping the app accessible
- Having features usable within one or two taps
- Keeping the barrier to practicing low
- Getting a large enough sample size for our survey

Implementation Challenges

- Our app scale was larger than anticipated
- A more robust UI framework would enable easier changes to meet HCI challenges
- Our Heuristic Evaluation earlier could have occurred earlier to allow more time for improvements

What Went Well

- Unity worked better than anticipated for building out a UI
- Our app is very close to being feature complete
- Our need finding and initial prototyping gave us a great base to start working off of

Future Work

- Make the app entertaining to use, with more animations and rewards.
- Expand lessons and practice sessions
- Develop the online features
- Deploy to an app store and get more feedback from regular users
- Improve the usability of the practice section