

# POWER OF MUSIC **CROSSTUNE**

Giving users power over their music sharing regardless of  
platform



# ABOUT CROSSTUNE

## Team

Renner Skidmore – Team Lead

Kendrix Henderson – Backend Engineer

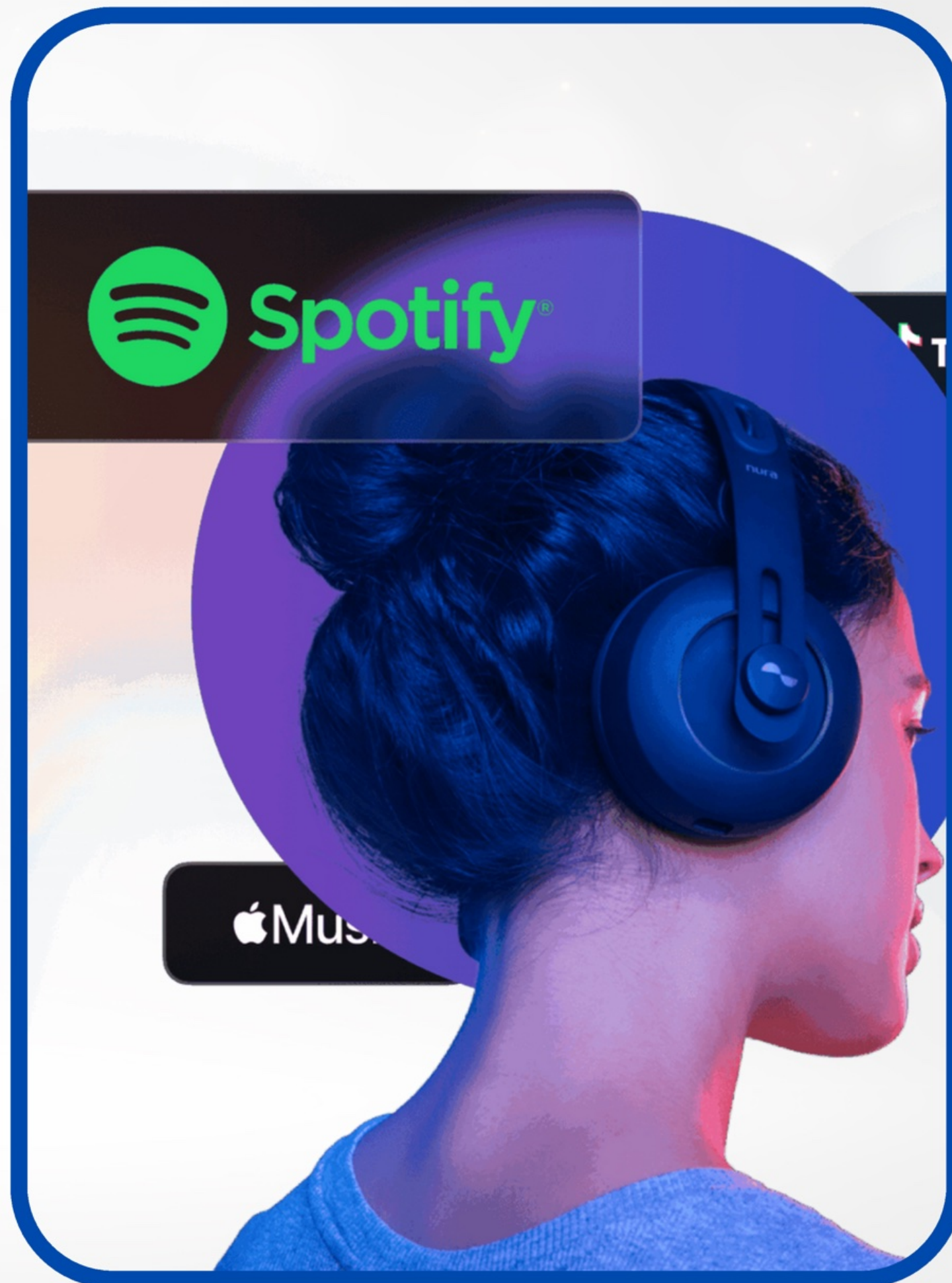
Shane Cao – Frontend Engineer

James Bowen – Architecture Design

## Mission

CrossTune's mission is to bridge the gap between Apple and Spotify that is dividing and polarizing music listeners around the world. As a society we need to come together and music is a beautiful place to start.

Music platforms should not add to the divisions that society faces today.





# TOOLS USED



**Github Project**

1



To streamline our version control and project management we used the github project tool and issue creation for SCRUM management

**Github**

2



Github is the Version Control Platform we used. Very functional but branch management is challenging and not intuitive

**VS Code**

3



We used VS Code as our IDE, it is well integrated and flexible as well as being compatible with AI like Github CoPilot and WindSurf

**UI Tools**

4



Bootstrap (UI design), handlebars (wireframing), partials (UI design), and Design.com (Logo creation)

**NodeJS and Express**

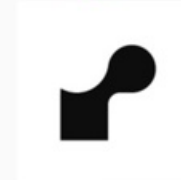
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NodeJS is difficult to use due to the javascript language, using typescript as a static language would be more helpful for debugging, and express for the framework

**Render**

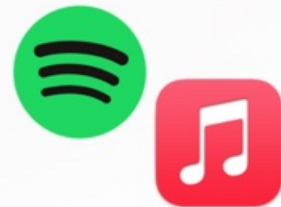
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Render is really slow to get the site up and running but they made the database linking process easier

**APIs**

7



Spotify: ★★★★★ - Easy to use, intuitive, public, simple  
Apple Music API ★ - Difficult to use, multiple privacy barriers and types of playlists, by far the most challenging part of this project

**Testing**

8



Mocha and Chai were easy to work with but the instruction process made the setup more difficult than need be

**Database**

9



Postgres SQL was simple and intuitive



# GITHUB PROJECT



JackkHuncho / Projects / CSCI3308-Spring-Project

🔍 Type / to search

🌐 CSCI3308-Spring-Project

Add status update

📄 View 1

+ New view

🔍 Filter by keyword or by field

Discard

Save

🔵 Ice Box 1

...

🟢 CSCI3308-Spring-Project #14

Playlist Comments Section

+ Add item

🟢 Todo 4

...

This item hasn't been started

🟢 CSCI3308-Spring-Project #12

Playlist Upvotes

3 Front End

🟢 CSCI3308-Spring-Project #40

Scope authentication to users

3 API

🟢 CSCI3308-Spring-Project #41

Add auto page refreshes

🟢 CSCI3308-Spring-Project #43

Scope PFP to User

2 Front-End

+ Add item

🟡 In Progress 3

...

This is actively being worked on

🟢 CSCI3308-Spring-Project #25

Playlist Save Implementation

8 API

🟢 CSCI3308-Spring-Project #39

Apple to Spotify ISRC Workaround

3 API

🟢 CSCI3308-Spring-Project #24

Playlist Upload Implementation

8 API

+ Add item

🟣 Done 23

...

This has been completed

🟢 CSCI3308-Spring-Project #19

Pay for Apple Developer Account

1 API

🟢 CSCI3308-Spring-Project #8

Playlist Display on Platform

3 MVP

🟢 CSCI3308-Spring-Project #23

API OAuths Implementation

8 API

🟢 CSCI3308-Spring-Project #20


Create Unit Test for /register


2 Testing

+ Add item

# BOOTSTRAP UI




 CrossTune




Post Playlist

Old

Renner's Old as shi


renner


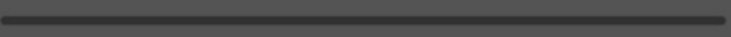





Old

Renner Skidmore

☒ Saved on Spotify



00:00



1

Sometimes a River  
The String Cheese Incident

05:20

2

Careless Whisper  
George Michael

05:02

3

Back In Black  
AC/DC

04:15

4

Thunderstruck  
AC/DC

04:52

5

Crazy Train  
Ozzy Osbourne



04:56


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# SPOTIFY AND APPLE API




 Spotify for Developers 


 **We are updating the criteria to be granted extended access to the Web API.**  
Please note that starting May 15, 2025 we're introducing some changes to the way we provide Web API extended quota mode access. For more information, read [here](#).


## Dashboard


 **CrossTune**

Create app

 Spotify for Developers

Apple Developer News Discover Design Develop Distribute Support Account 

Watch the latest videos about MusicKit 



## MusicKit

MusicKit lets users play Apple Music and their local music library from your app or website. When users provide permission to access their Apple Music account, they can use your app or website to create playlists, add songs to their library, and play any of the millions of songs in the Apple Music catalog. If your app detects that the user is not yet an Apple Music member, you can offer a trial membership from within your app.



# PROJECT MANAGEMENT

## AGILE

We used an agile methodology and scrum to assign tasks, stories, and epics to efficiently progress our project

### POINTS

Our points were based off of our expected time commitments which ranged from 1 point for submissions to a 13 point story for understanding Apple API

### STORIES

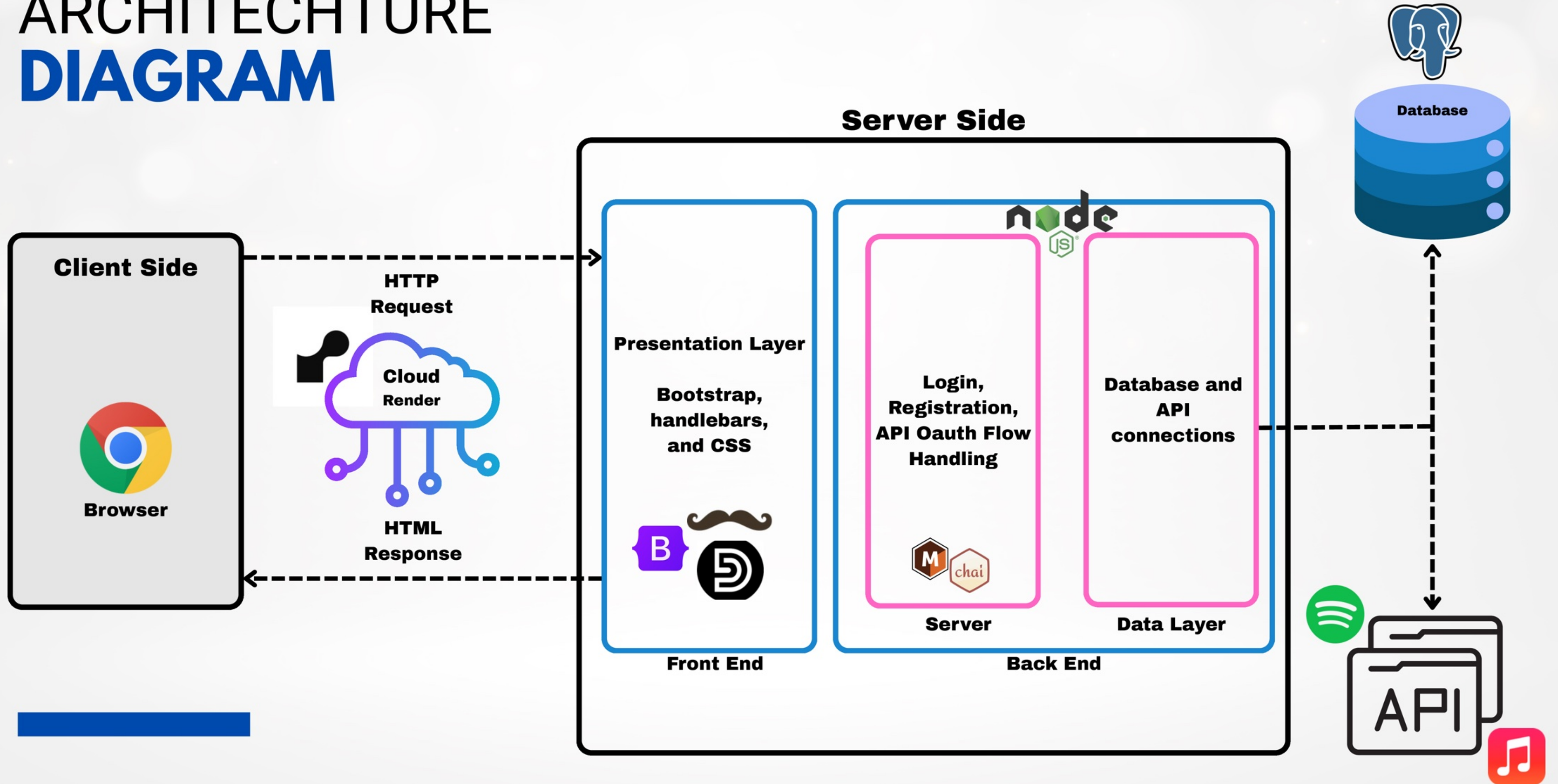
Our stories were simple tasks that were used to manage submissions, simple features, and database setup

### EPICS

Our epics were APIs, Front End, Back End, Minimum Viable Product, and Testing



# ARCHITECTURE DIAGRAM





# CHALLENGES



1

Apple developer and privacy rules made integrating and interacting with their platform extremely difficult

2

Efficient use of version control to move forward and reduce bugs being pushed to main

3

Restarting the database to fit the needs of Apple workarounds and profile information





# THE FUTURE OF **CROSSTUNE**

What we will add to improve the design, functionality and implementation of our application

## **ADS**

To monetize our product we would add ad bars to both sides and sell the space to musicians, event promoters, and more.

## **PLATFORMS**

To scale CrossTune we will add other music platforms like YouTube Music, Amazon Music, and SoundCloud

## **LIKES AND COMMENTS**

To increase interactivity and a sense of community we will add playlist likes and comments. The playlists on the home page would then be sorted by likes.





# PROJECT DEMO

CROSSTUNE

RECORDING

**THANK YOU**

**CROSSTUNE**

