My Musical Life

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Problem Statement

Functional Requirements

- User Data (from mobile device)
  - Location
  - Weather
  - Schedule
- Spotify Account
- Music Recommendations
- Mapping Sensor Inputs to Songs/Playlists
- Volume Control

SW/Technology Platform(s)

- IDE: Xcode

- Backend
  - Amazon Web Services
  - MySQL

- Programming Languages
  - Swift
  - Python

- Testing
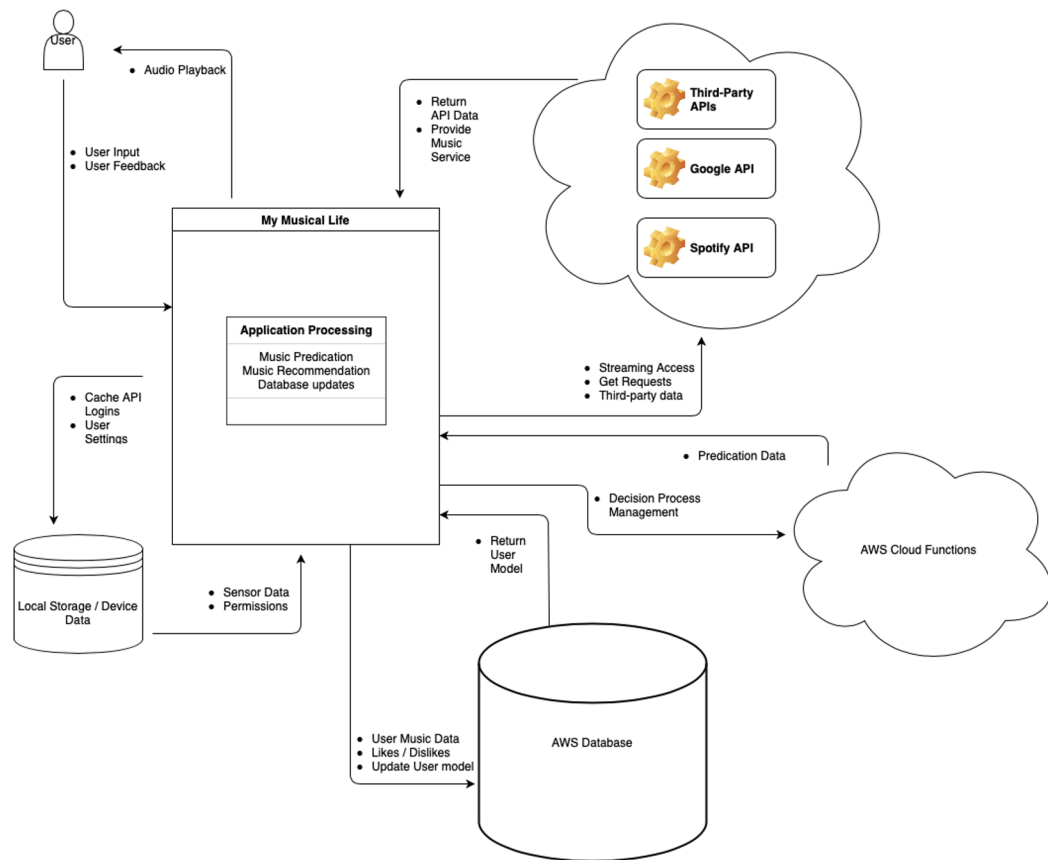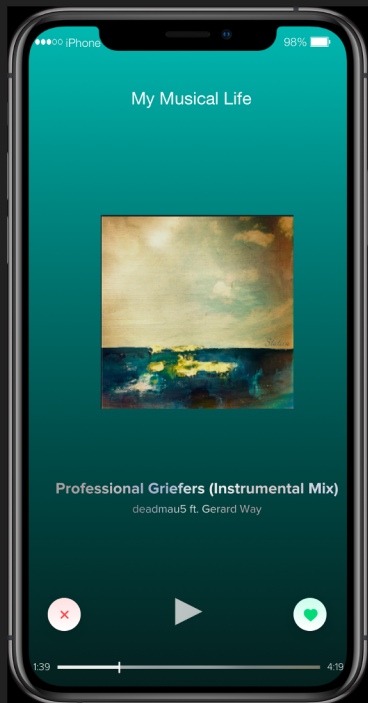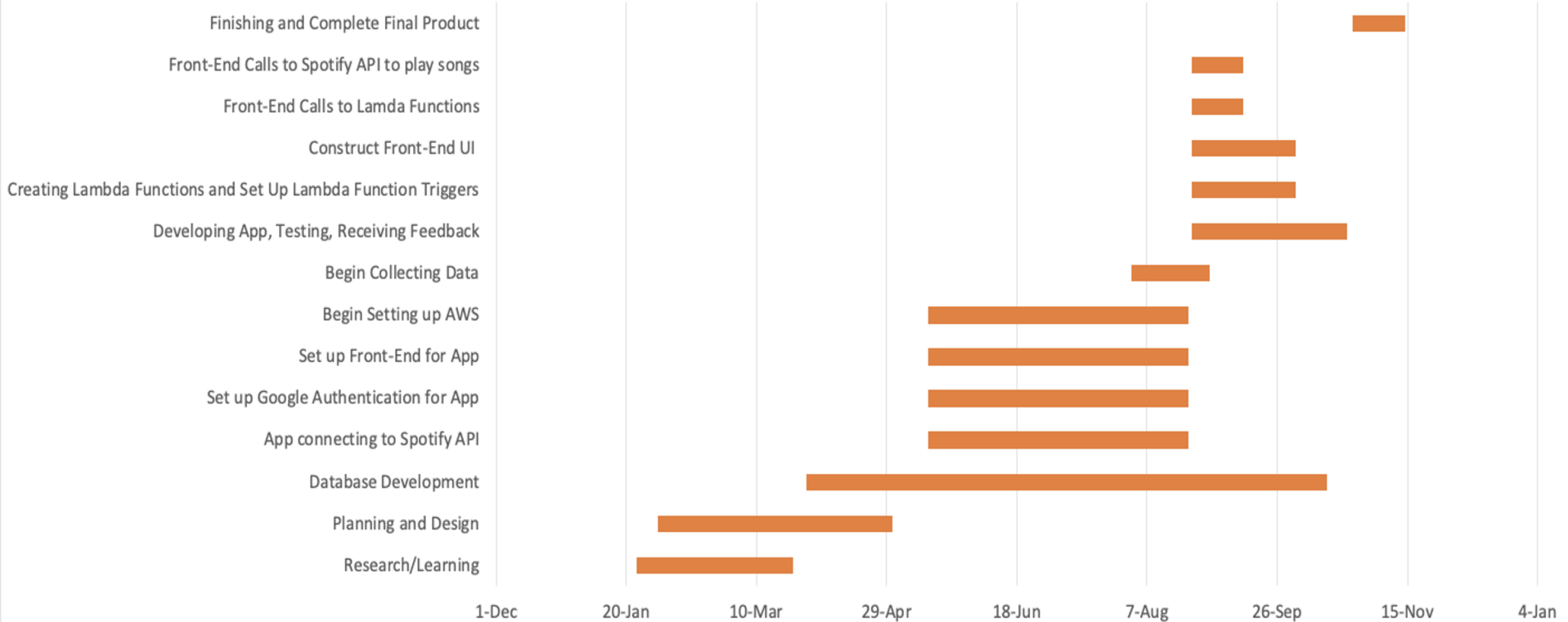 - TestFlight (from Apple)

Conceptual Sketch

Sensor Input Table

Inputs (API/Framework)	Result
Core Location	Location, Movement
Healthkit/Core Motion	Steps, Heart Rate, Movement, Date of Birth
IO Kit	Bluetooth Connectivity
Core Motion	Start Date, End Date, Number of steps, Distance, etc.
IOBluetooth UI	Bluetooth Connectivity
CarPlay	Bluetooth Connectivity to car
Asset Playback	Control Volume
Google API	Schedule/Calendar, Sign-In
Spotify	Return Songs, connection status, etc.
Open Weather API	Temperature, Wind Speed, Cloudiness Percentage, etc.
Dates and Times	Date and Time

Next Steps

- Transitioning into development phase
  - Build out basic front end UI (login and home pages)
  - Prototype music recommendation algorithm using Spotify metadata
  - Create Lambda functions to create bins within RDS
  - Create Lambda functions to store song names into bins
  - Plan out the first sprint (Agile)

Project Milestones & Schedule

Project Timeline

Team Roles

- **Christian**
  - Testing
  - Project Management
- **Vignesh**
  - Swift / Front-end development
  - AWS Integration

- Chaz
  - Swift / Front end development
  - AWS Integration
- Vatsal
  - Python/Backend Development
  - Spotify API and Swift Integration
- Daksh
  - Python/Backend Development
  - Lambda Functions

Covid-19 Impact / Technical Challenges

- Meeting frequency increased
- Project timeline shortened
- Remote Work
- Impact on Testing
- Use cases impacted
- Decision Making Algorithm

Thank You!