

Background

Running while listening to **music** is a popular practice because it can increase a runner's performance and endurance. However, the **tempo and energy** of a song are significant factors for a runner to run comfortably and perform their best. Running with music that does not match the runner's pace can **hinder their rhythm**, therefore making the runner **perform worse**.

Features

This app allows users to choose predefined speed trends over the course of a run in the **form of a graph**. They then input their desired distance and average pace alongside this. Leveraging these details as well as a library of **downloaded** songs and their corresponding beats per minute, the application generates a playlist that aligns with the graph configured.

Target Audience

This app targets an **athletes** who have difficulty finding a set playlist that adapts to one's pace as it changes.



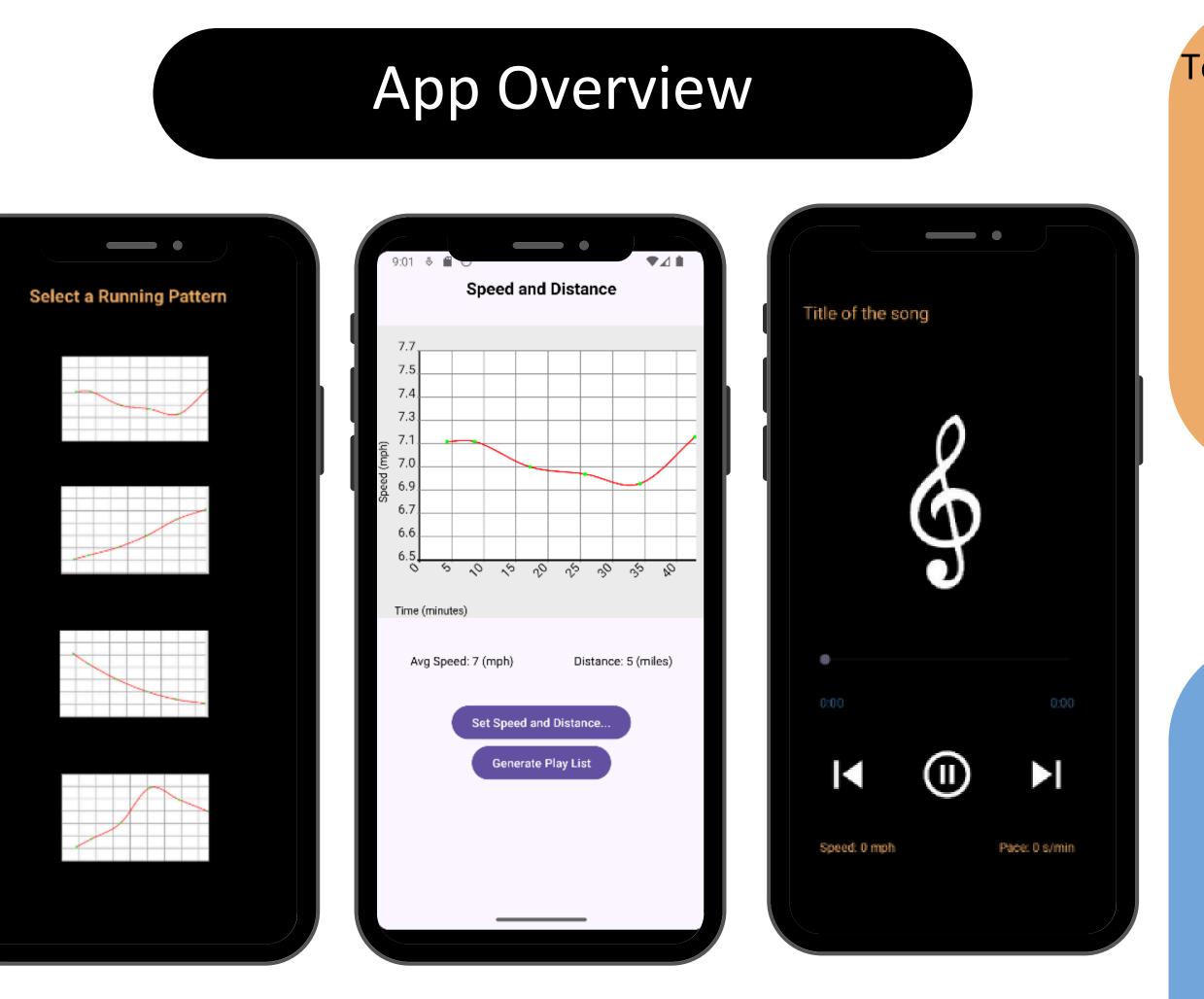






TuneRunner

Adnan Dembele, Heidy Rodriguez, Ethan Zhou



Flow Chart

User inputs the timing and average speed of their desired run, and select a graph.

The run is divided into sections, BPM through each section is calculated. The csv file is read and each section is assigned random songs that match the BPM

> A playlist is created, and played by the app. The user can enjoy their music!



Tools and Technologies

To achieve this, some of the tools and technologies used are:

- Android Studio for programming the entire app
- **SongBPM** to find the BPMs of different songs
- Google Sheets to create csv files for reading the BPMs and link them to a specific song
- GitHub was utilized for external storage and cloud collaboration

Competitors

Our app has 3 major competitors:

- Run BPM Creates a pre-determined playlist based on a playlist and BPM that the user inputs.
- FITRADIO Workout Music Creates a pre-determined playlist, in which all of the songs have the same BPM and mood based on user input.
- **PaceDJ** Creates a playlist that adapts as a user's pace changes, with the user choosing a playlist at first.

Future Extensions

Future Extensions and improvements for this app include:

- Linking the app to **Spotify** or some other music application to access a wider variety of songs and genres
- Assessing a phone's **pedometer** to more accurately define a users BPM over the course of their run.