

## 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.



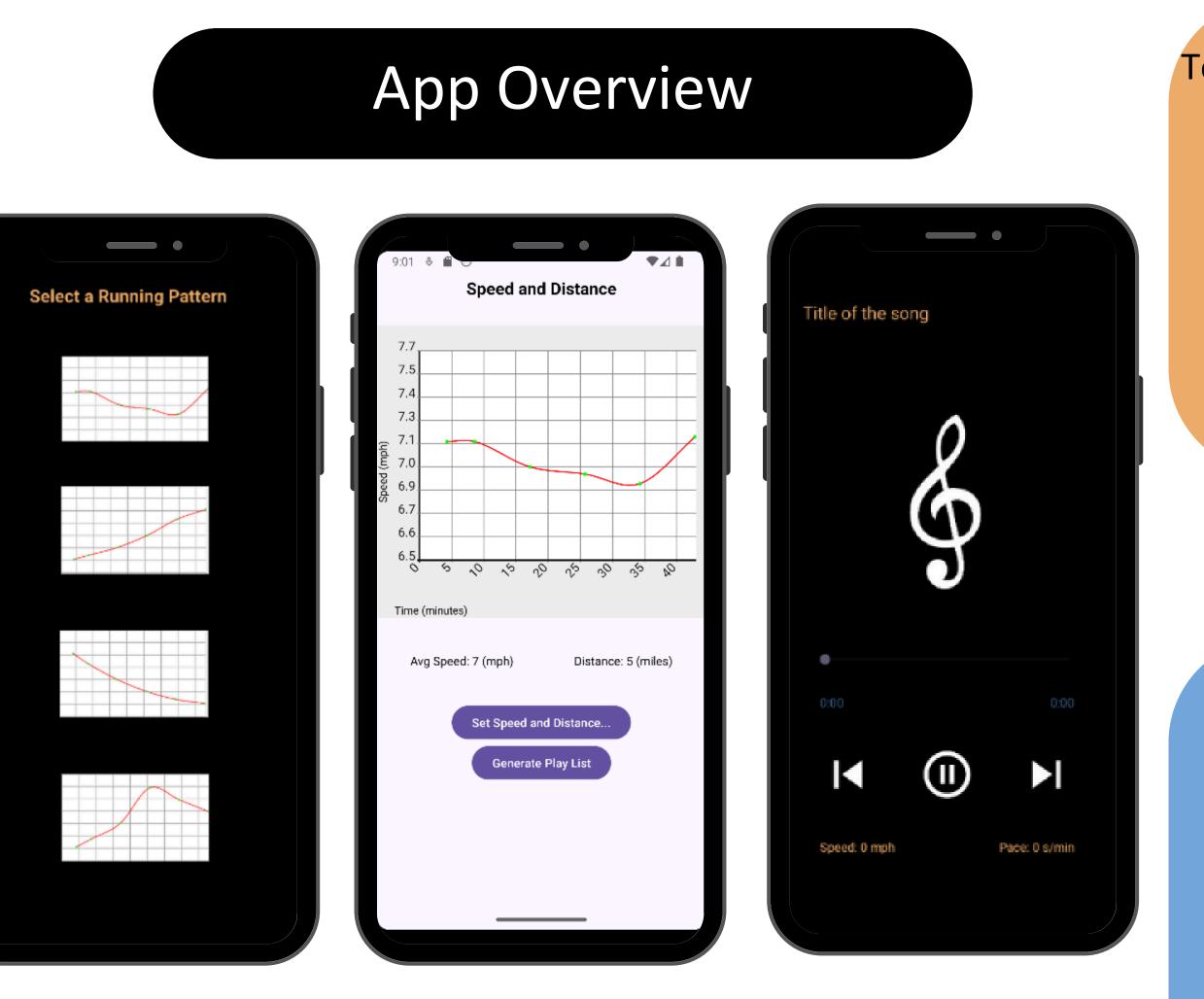






# TuneRunner

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### 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.