

Technology Bucket: Software - Mobile App development
Company Name: Samsung R&D
Team Leader Name: Ariba Akber

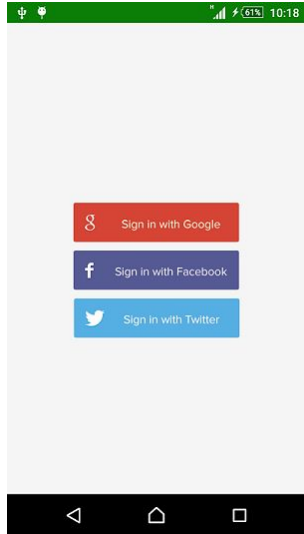
Category: Software
Problem Code: SS2
College Code: U-0108

Problem Statement: Eco-Drive

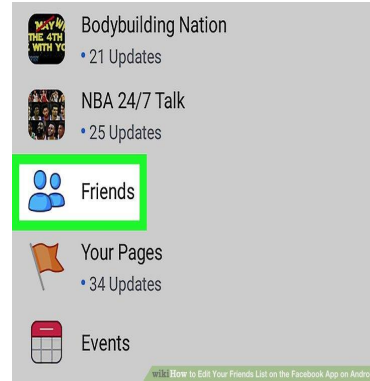
Basic Idea:

1. Air pollution in India is a serious issue with major contributors being vehicle emissions and traffic congestions. Individuals and communities can play a more effective role in reducing the air pollution if they are aware of their contributions to the same.
2. Thus we propose an **Android** app to aware the individuals and hence communities to curb carbon footprints in a much **gamified manner**.
3. Our solution idea uses **Android, Java, Xml, DetectedActivity class, GPS, Firebase and Machine Learning** as technologies.
4. The user data based on his/ her activities will be recorded, and then using this data real-time to compare the results with the added friends and family-members in the friends list, in a leaderboard.
5. User will be authenticated via Google sign-in or Facebook-auth with required permission and then grabbing their facebook's friend list, thus providing an easy way to compete with known friends.
6. Moreover the user will be able to add more friends, via their contacts or the app's user database.
7. Using Android's DetectedActivity class to detect user's activity and getting more infos.
8. Based on the user's scores the user will be awarded badges which can be shared on other platforms to show off their carbon footprints data, and hence giving him a status in the community.
9. The user can redeem the earned coupons in nearby stores, to promote him to use the app.

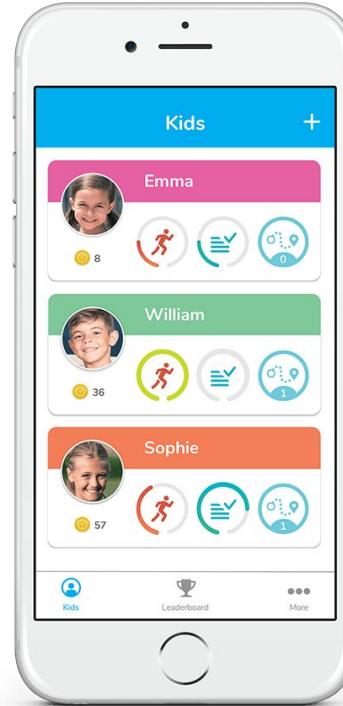
Login via Multiple Platforms and Earning Badges



Facebook Login



Got the Facebook friend-list data after permissions



LEADERBOARD

The friends data retrieved can thus be used on leaderboard to compare results.



BADGES : to earn

App Workflow :

POP-up to let the user select which means of transport he's using.



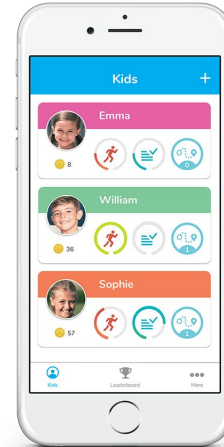
The app will continue running in the background, and collects the data using Android's **DetectedActivity** class.



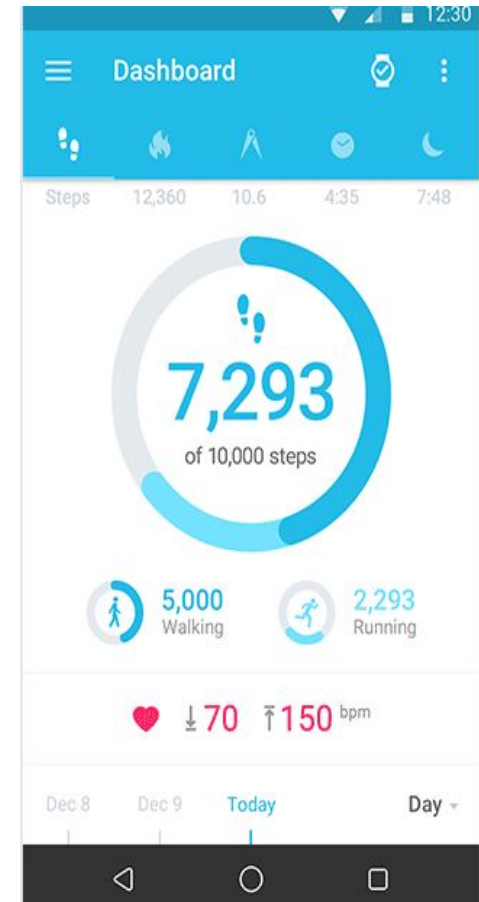
Our App



Badges Assigned



Leaderboard



Visualizing User's data

Tech Stack

- Application: Android platform. Java , XML.
- Machine Learning.(python) for Data Visualizations
- Android's DetectedActivity class.
- GPS, Material Design
- Firebase for backend, JSON

Use case

- An app with social impact.
- Awarig people and communities to decrease carbon footprints this curbing air-pollution.
- Much socially interactive app.
- Promoting go-green practices.
- Aligning with Prime minister's Swachh Bharat Abhiyaan.

Show Stoppers

- Providing cost-effective and efficient solution to curb air-pollution.
- User friendly easy to use android app to get precise and accurate results.
- **Firebase to synchronize realtime results.**
- Firebase database for backend.
- Android's background activity thread.
- All data stored in Database for further access.
- Badges to promote app-usage.
- Redeemable badges.