ANDROID APPS WITH GPS FEATURES

Introduction

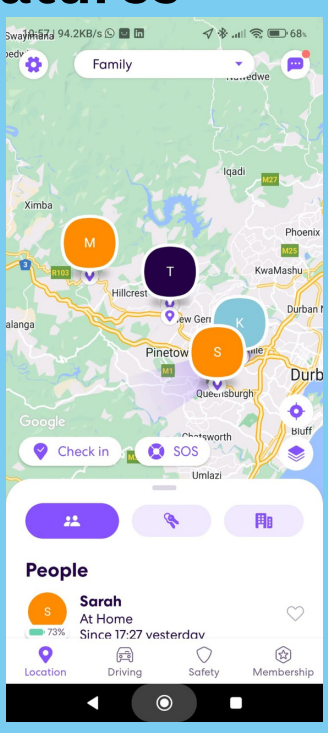
As part of my final year college project, I aim to develop an intelligent virtual assistant that can provide helpful assistance to users. This virtual assistant will be designed to efficiently handle a variety of tasks, ranging from answering questions, providing information, and offering guidance, to conducting basic tasks and executing commands. By utilizing advanced natural language processing and machine learning techniques, the virtual assistant will be able to understand user queries accurately and respond in a timely and contextually relevant manner. The project will not only showcase my technical skills in developing an intelligent system but also contribute to the advancement of conversational AI technology.

Life360

Life360 is a comprehensive family tracking app that uses GPS technology to ensure the safety and well-being of family members.

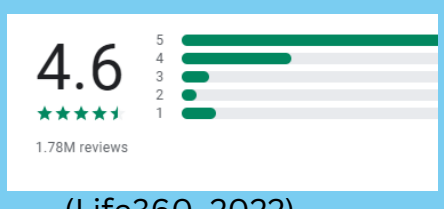
Key Features

- Real-time location tracking of family members.
- Geo-fencing: Set up virtual boundaries and receive alerts when family members enter or leave designated areas.
- Emergency assistance: Access to panic alerts and SOS features for immediate help.



(tomlinson (Fig 1))

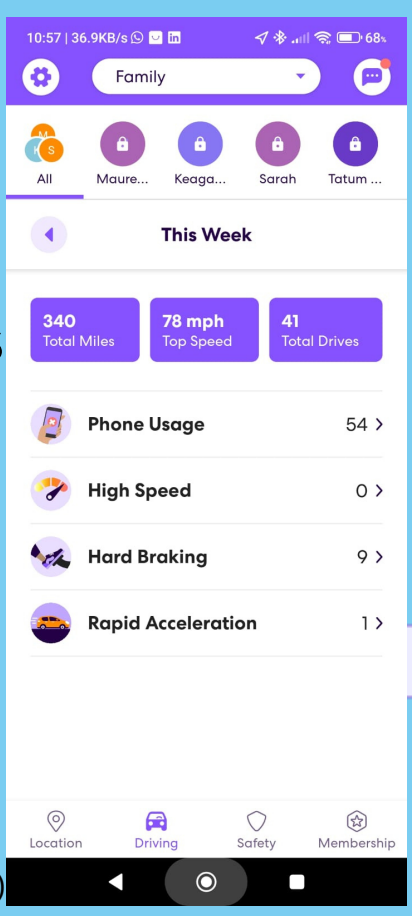
dash board show a simple map with pins to all memebers that are linked in a group allowing you to track each other



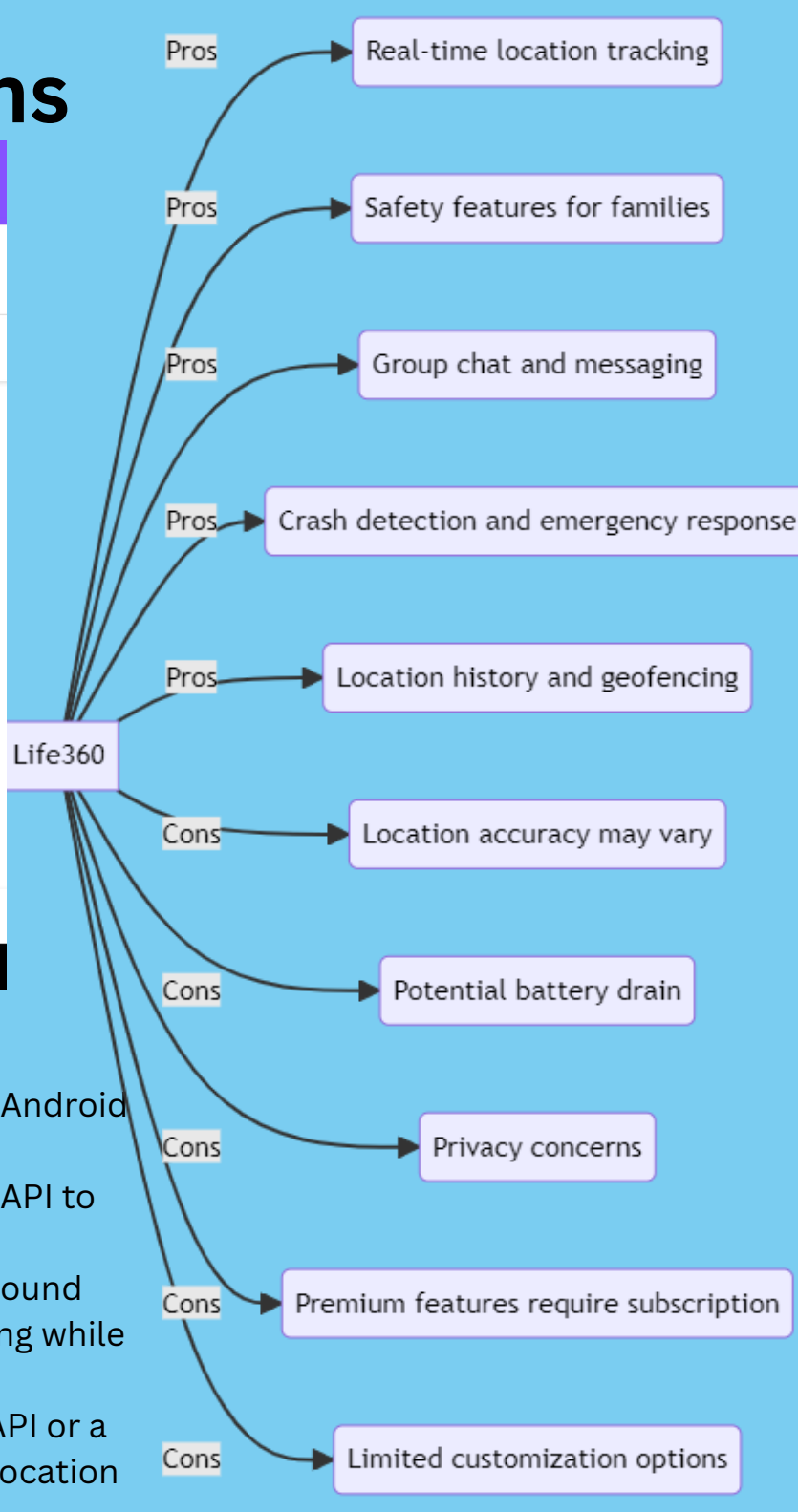
(Life360, 2022)

Pros and cons

this page shows he driving habits of users



(tomlinson, Fig 2)



Implementation

Life360 would have been implemented using Android Studio.

The app would utilize the Android Location API to access GPS functionality.

It would use background services or foreground services to ensure continuous location tracking while optimizing battery usage.

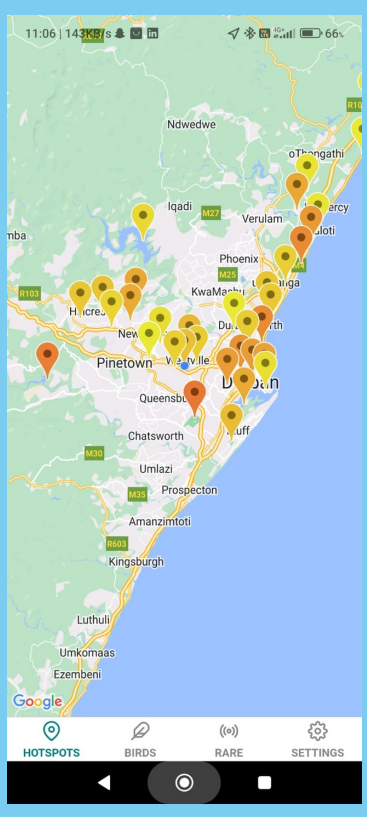
The app would integrate with Google Maps API or a similar mapping service to display real-time location information.

GoBird

GoBird is a bird-watching app that utilizes GPS to help bird enthusiasts identify and locate different bird species.

Key Features

Bird identification: Browse a comprehensive database of bird species and learn about their characteristics and habitats.
GPS tracking: Pinpoint your location and discover nearby birding hotspots.
Sightings log: Keep a record of bird sightings and share with other birders.

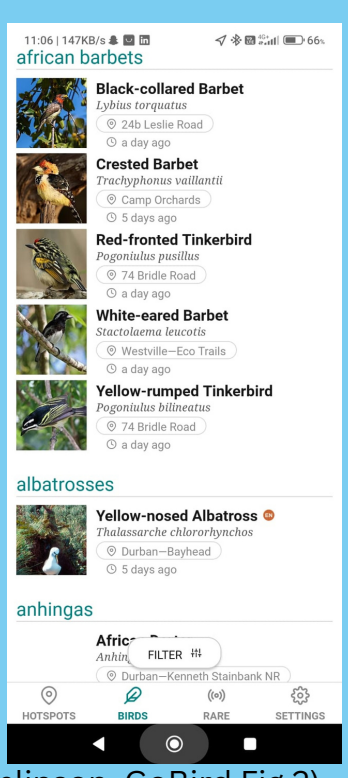


this page shows the bird siteings on a map

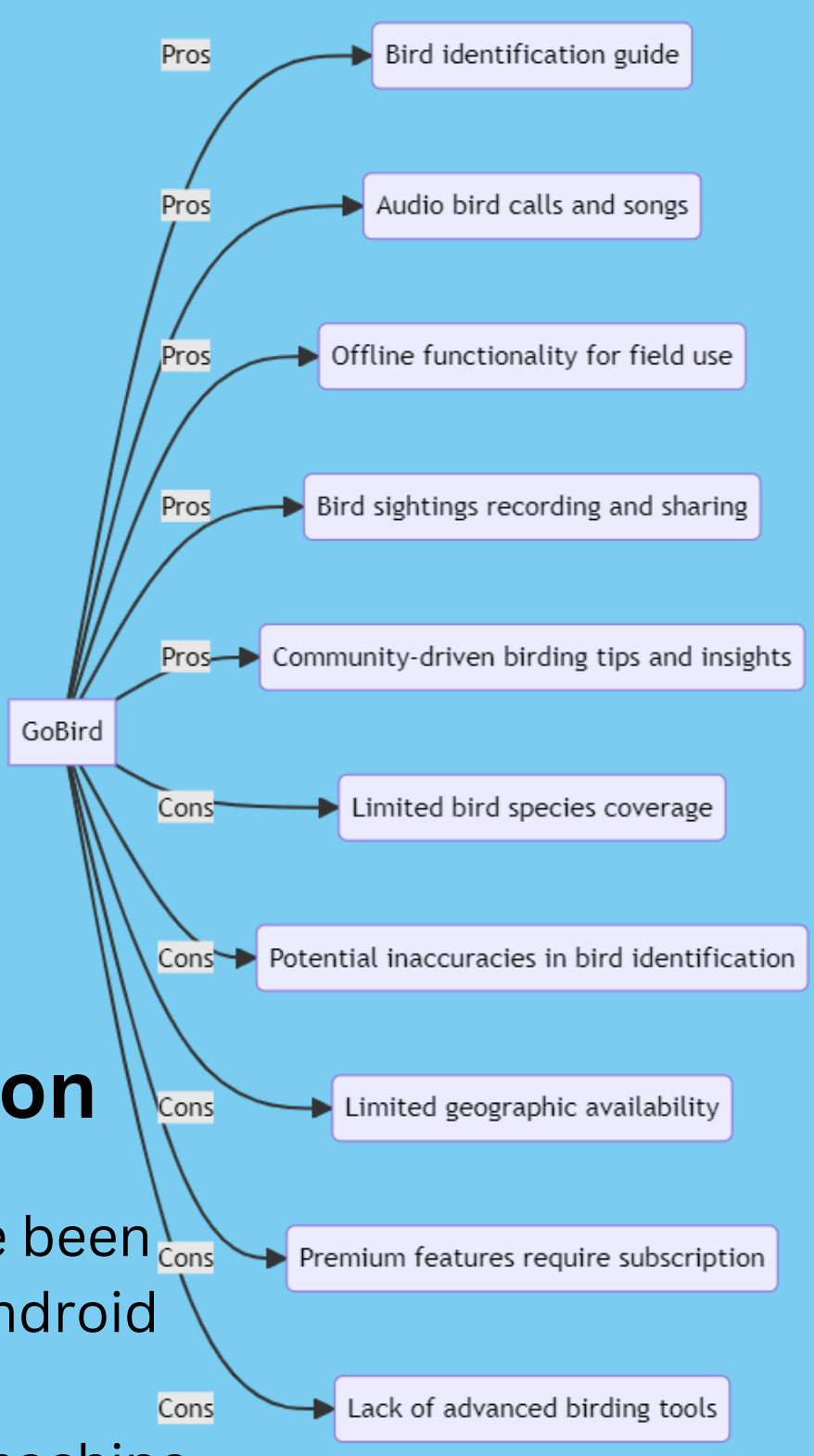
(tomlinson, GoBird Fig 1)

Pros and cons

this page shows the birs sitings in a text format when clicked it takes you to the map location



(tomlinson, GoBird Fig 2)



Implementation

- GoBird would have been developed using Android Studio.
- The app might use machine learning algorithms, such as image recognition models, to assist with bird identification.
- GPS functionality would be implemented using the Android Location API to determine the user's location and suggest nearby birding spots.
- The app might also leverage the microphone API to record and analyze bird sounds for identification purposes.

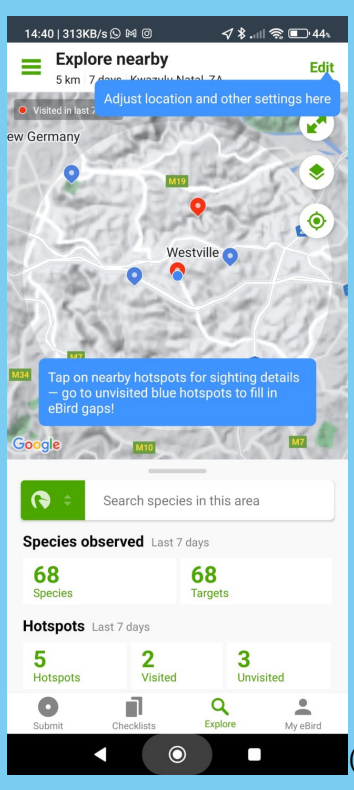
(play.google.com, n.d.)

eBird

eBird is a global bird observation platform that enables users to record bird sightings and contribute to scientific research.

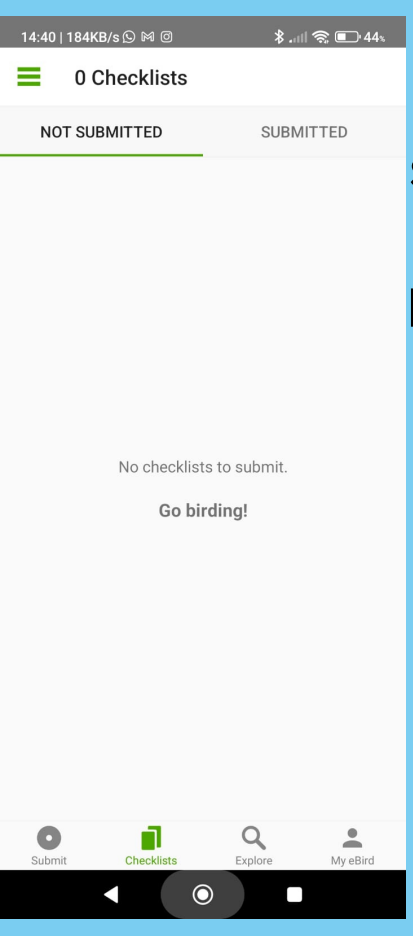
Key Features

- Submit sightings: Report bird observations, including species, abundance, and location, to contribute to bird conservation efforts.
- Personalized checklists: Create customized checklists for specific locations or birding trips.
- Explore data: Access a wealth of birding data contributed by users worldwide.



(tomlinson, 2023a)

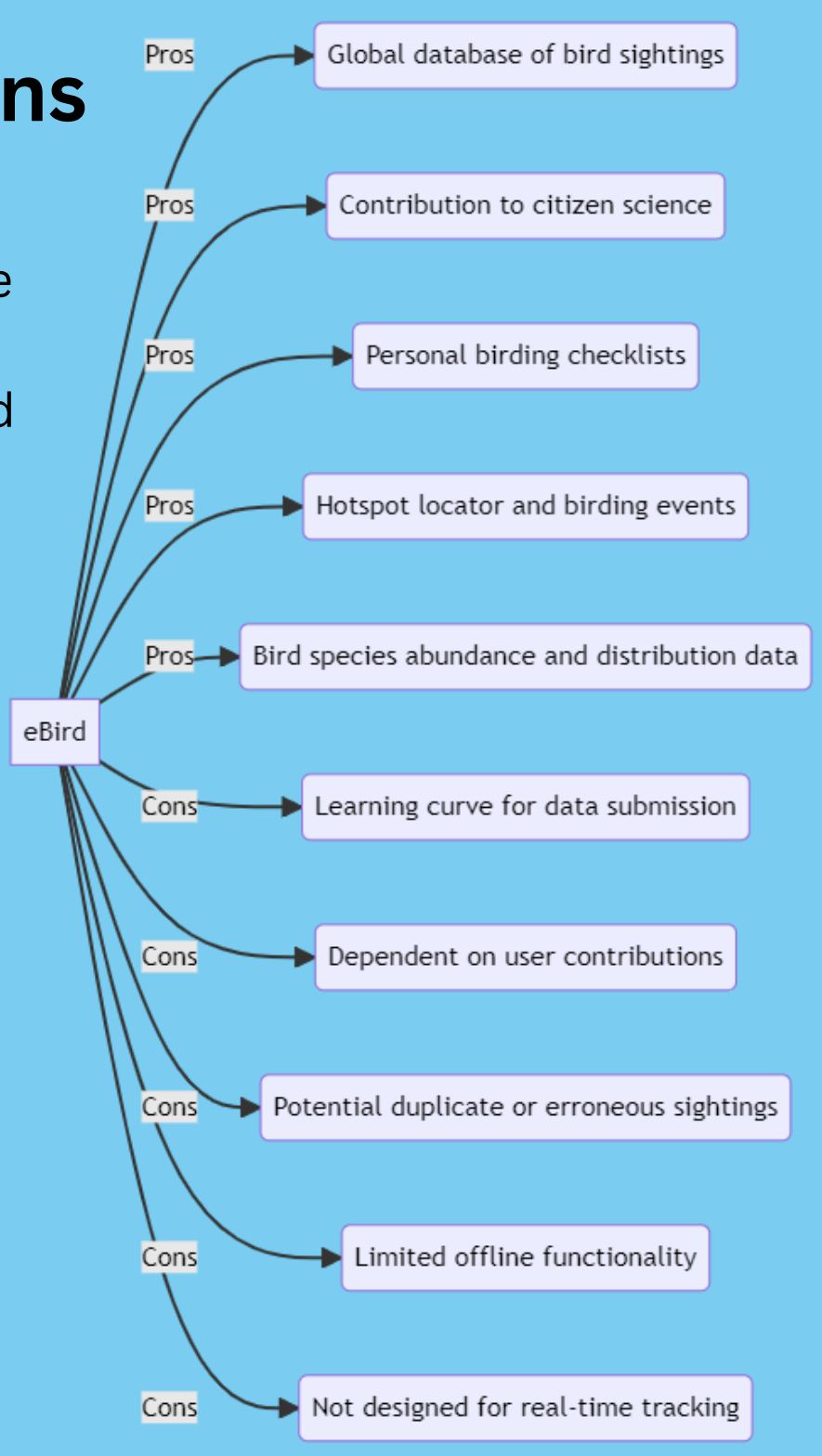
Pros And Cons



this screen shows all the birds you have spotted and marked

(tomlinson, 2023b)

(Team eBird, 2021)



Implementation

- eBird would have been developed using Android Studio.
- The app would integrate with the Android Location API to capture the user's GPS coordinates for sighting submissions.
- Backend systems and databases would be set up to handle user-generated data, including validation checks to maintain data integrity.
- The app might employ caching mechanisms to store data locally and synchronize with the server when an internet connection is available.

Features	Life360	GoBird	eBird
Real-time location tracking	✓		
Safety features for families	✓ (Crash detection, emergency response)		
Group chat and messaging	✓		
Location history	✓		
Geofencing capabilities	✓		
Bird identification guide		✓ (Audio bird calls and songs)	
Offline functionality		✓	
Bird sightings recording and sharing		✓	✓
Community-driven tips and insights		✓	
Bird species abundance and distribution data			✓

Conclusion:

Summarize the benefits of using GPS-enabled apps for different purposes, including family safety, bird-watching, and citizen science

References

Ellis, D. (2023). 10 Free API Maps Alternatives to Google Maps: Pros and Cons of Each. [online] Hubspot.com. Available at: https://blog.hubspot.com/website/free-api-maps [Accessed 25 Aug. 2023].Life360. (2022). INT'L: Features: Location Safety - Life360. [online] Available at: https://www.life360.com/intl/intl-features-location-safety/ [Accessed 23 Aug. 2023].play.google.com. (n.d.). GoBird - Guide to Nearby Birds - Apps on Google Play. [online] Available at: https://play.google.com/store/apps/details?id=com.thenerdbirder.GoBird&hl=en&gl=US&pli=1 [Accessed 23 Aug. 2023].Team eBird (2021). Explore species on eBird Mobile - eBird. [online] @Team_eBird. Available at: https://ebird.org/news/explore-species-on-ebird-mobile [Accessed 23 Aug. 2023].tomlinson, keagan (2023a). fig 1.tomlinson, keagan (2023b). fig 2.tomlinson, keagan (2023c). goBird fig 1.tomlinson, keagan (2023d). goBird fig 2.