OnPoynt Drone Racing

Mobile App

Gage Dittmer, gmd150130@utdallas.edu; Greeshma Nallapareddy, gxn140030@utdallas.edu;
Harjas Kaur, hxk131130@utdallas.edu; Meghana Vellaturi, mav140130@utdallas.edu

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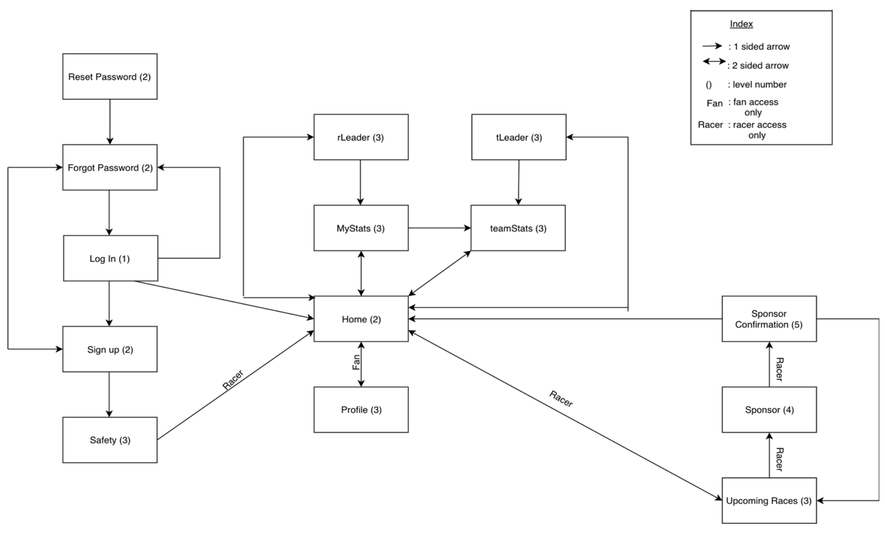
Department of Computer Science
Erik Jonsson School of Engineering & Computer Science
The University of Texas at Dallas
Richardson, TX 75080, USA

Abstract

OnPoynt Aerial Solutions provides drone kits to educational institutions, and they've recently gained interest in the education and community drone racing market. Our project consists of developing a mobile application as part of a drone racing and gaming system. The mobile app will work across multiple platforms including iOS and Android. The app will provide a means of connecting clients to the drone racing scene. Users can also review previous races and view information like stats of races, track racer performance, and even view archived footage of past races. The app is designed for both drone racers and fans of drone racing. The app provides a new way for the drone racing community to keep up with drone racing and have it at their fingertips.

Architecture

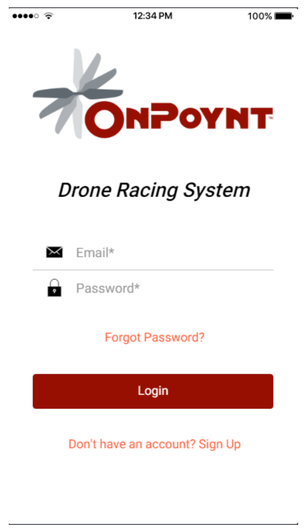


Our main tools for creating this mobile application were Google IONIC3 and XAMPP with phpMyAdmin. Google IONIC3 allowed us to create both Android and iOS versions of the application simultaneously. XAMPP allowed us to create local servers that could be used for storing test data and ensuring that our applications can retrieve information from a server. phpMyAdmin allowed us to look at what's being saved in the database and make adjustments as needed. The live and saved videos are played via Youtube links.

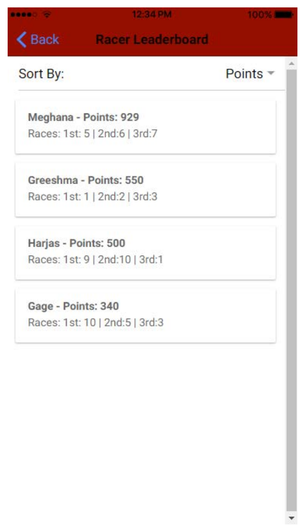
Impact

Currently, there is no mobile application for the drone racing community that allows for live race video streaming. This app enables racers and fans to check the stats of other racers as well as their own on a mobile device. The geo-fencing of upcoming events allows users to see the drone racing events happening near them. This encourages the formation of more drone racing communities. It exposes users to more drone racing events near them that they may not have found otherwise. This builds up the idea of being a drone racing fan and gives important capabilities to this niche group. Having such features in a mobile application makes it easy for users to keep up with drone racing on the go. The personalization of the application down to area, their favorite teams/ racers, and their drone specifications allows the app the be customized to their credentials and preferences. This will help OnPoynt to have a premier mobile application that introduces the concepts of drone racing to the mobile platform.

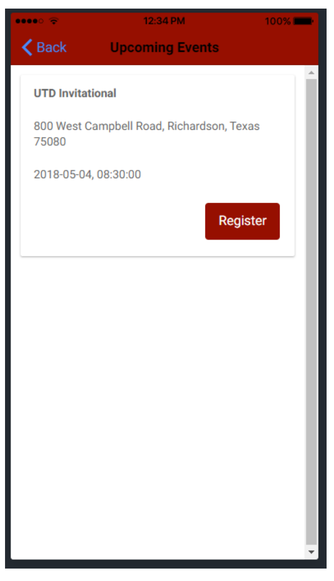
Results



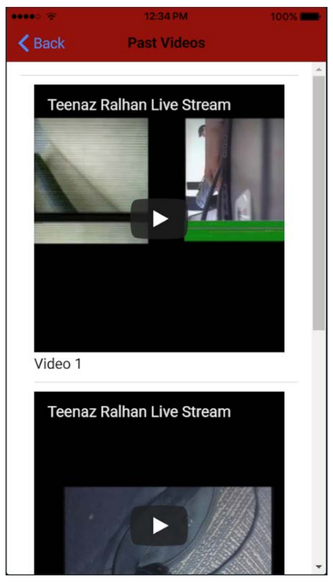
Users can log in with an existing account or create a new one which would then allow them to create personalized profile either as a fan or a racer. There are also password recovery capabilities sending a new temporary new password to the user via email and allowing them to reset their password with it.



The Racer leaderboard shows the top racers which can be organized by points or by placement. The team leaderboard is similar with teams or schools with the highest totals appearing at the top.



Upcoming events shows events/ races in the users area. It displays events in/near the zip code the user has in his/her profile. This is done using a zip code API. The racer can then register for the event which will show them the sponsors and the race rules.



The video screen allows the user to see drone footage shot by the drones during the races. The video is exactly what the drone racers see in their goggles when they are participating in a race. Users can look at videos from past raes or live footage from an ongoing race via live streaming.

Summary

We were able to create a clean and simple mobile application that has the original features we wanted. Our application has a social media feel where fans can follow their favorite racers or teams. The simplistic front end makes it easy to use and appealing for a variety of users. The geolocation features in the app give a sense of community and opportunity for local drone racing events to grow. We are able to play saved and live drone videos filmed by the drones during races on the app for racer and fan viewing on the go.

Metric:

Our metric for success was that we implement all the features initially discussed. We have been able to successfully implement all the initial features other than the features our sponsors decided to push off to version 2 due to time constraints.