**Avalanche Lab App Scope of Work**

***Questions:***

After completing the web app, is it possible to use a hybrid app development to develop the native iOS and Android apps (Flutter, React Native, Iconic, Framework , ect.) or are the integrations with the phone features and push notifications too robust to use such wrappers?

***Current State of Project:***

**Web App:** Located at app.avalanchelab.org. The web app and should be responsive and flexible for mobile platforms and allows users a site to “bookmark” the app for quick non-native field use.

**iOS App:** The app was functioning until the upgrade from 32 bit to 64 bit. Since then and to this point with the new iOS11, the app has not been live in the app store. The functionality should be good, as the app was written by a seasoned iOS developer, but just needs a makeover and synchronizing with the new web app design.

**AWS Server:** This is the backbone of the hosting services for data for the avalanche lab platform. This will probably need to be updated along with the apps in order to make sure the systems all talk together.

***Goals:***

* Have a web app and native platforms (Android and iOS) that allow users to view and log data at home or in the field using the phone to enhance tools.
* Maintain two level feature structure with “Pro” level as donations and a free version.
* Have a simple and up-to-date app that allows users to log, share, and view data and reference materials on the fly from anywhere.
* Have project completed for ski season trial 2019.
* Maintain the same easy to operate click and move feel that the original avalanche lab app had.

***Milestones:***

* Review and final design plan
* Web app done for trial
* Web app complete
* iOS done for trial
* iOS complete
* Android Complete

***Deliverables:***

* Web App
* iOS Native App
* Android Native App
* Server Updates

***End Product:***

In the end, I need a web/native app that allows users to access, view, and log data from home, mobile, and field/off grid. It should work on web, Android, and iOS, and allow the use of tools from the phone (camera, accelerometer, Bluetooth, sensor probe, temp. sensor, ect.) to import data into the app. It needs to be easy to function (clickable with stylet in the field), and yet very intuitive in how it guides you through the backcountry process and makes sure you collect the right data, share it, and use it to make better decisions the next time.

***From a Technical End:***

I need a responsive and functional web app/iOS/Android app that will easily work for long-term sustainability and easy-to-manage infrastructure/upgrade-ability. There are going to be large data sets and managing how these interact via web & native; and then how these manage the integration of tools such as Bluetooth headsets, phones, sensors; to create a robust and easily accessed/edited/shared data set. This then needs to be easily queried by researchers from an easy-to-manage frontend through the app. There are also a lot of subtleties in how the data has to be prepared so that it meets the different international guidelines. These all create a unique challenge.