Project Proposal
CIS 407
Name Options: Leafit (alone), BeLeaf (in yourself)
January 19, 2017

Team members:
Alec Savoy
Nathan Heller

Description:
We are interested in creating an app that recognises plants by their leaf shape and then gives you information about them. This would be useful in hiking or camping scenarios when you want to learn about the environment around you. Essentially, the application would take an image of a plant, apply filters and analysis on it, and then return matches based on a percentage scale.

What Nathan wants out of the project:
To gain experience building an app from top to bottom, with consideration given to front-end user experience and “back-end” (database is stored locally in this instance) actions. Primarily, I want to research and apply a fairly advanced technology (image recognition) to a working proof-of-concept mobile app. The foundation we build, if done right, should provide avenues of scalability going forward. Tackling that scalability should provide valuable experience in code base maintenance.

What Alec wants out of the project:
I want to learn how to build an interactive app as well as gain experience with face / shape recognition. Learning how to work with databases and front end design is another goal that this project helps with. Developing a product with scalability in mind is an issue I have run into during hackathons and successfully creating a prototype would provide great experience. Also, I would like to be able to go hiking and know, with full confidence, which plants I can or can’t touch.

Milestone 1:
For milestone one we want to have a working backend with examples from a few local plants. We aim to use either the Clarifai api or the Google Vision api to assist in the photo match and labeling process. In this stage we want the program to know about five to ten different plants to show that it works. A larger, more commercial release would involve a remote and larger database consisting of thousands upon millions of leaves that the user could get information from. For our project the database will be stored locally on each installation.

Milestone 2:

For milestone two we will have a working UI and integration with the camera as well as improve the matching algorithm we created in milestone one. At this point, based on the api that we chose, we would either create this project in java (for android) or swift (ios).