ShelterDash Project Proposal

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In this project, I will build a “dashboard” web application showing information from animal shelters on Facebook about new intakes, adoptable animals, and animals in need of a home at risk of euthanasia.

This tool may be of interest to multiple audiences:

* People looking to adopt an animal from a shelter or otherwise rescue.
  + There are hundreds of lonely animals at shelters and likely just as many people who are there and want to adopt, but the connection has yet to be made. You can never predict what animals will be at a shelter, so it can be a frustrating process for those who want to help these animals yet do not have the information to do so. Many shelters post about their new arrivals, as well as their animals who have been hard to adopt or who only have so many days left – if someone were to have a feed of all these types of posts from their local shelters, they could more easily find their perfect match and potentially bridge the gap between all the animals and all those looking.
* Shelters and local organizations may also find the tool interesting or helpful.
  + Shelters are already dealing with the gap of connecting animals to owners – they post to social media and try to spread information about their animals for this very reason, yet these posts still struggle to reach the right people. With a tool like this, shelters may feel more motivated to consistently post about their arrivals and facilitate the process of connecting and adoption.
* Even those who are not looking to adopt may find this tool useful.
  + There are many animal advocates out there – in fact, for the number of people out there looking for a pet but are not being reached by the posts that may be relevant to them, there are more people who already have animals/are not in the position to adopt who regularly “signal boost” shelter posts, and desperately try to spread them to their network or a larger audience in hope they might reach the right people. With a tool like this, advocates may more easily be able to direct their friends and loved ones who are looking to a tool that may be useful to them. It is a way that anyone could contribute to the cause of finding animals a home and not letting them be euthanized.

## Data sources, libraries and planned processing

My project will use information from Facebook. Shelters are likely to have presence on multiple social media platforms, including Twitter and Instagram as well, however I will be focusing on Facebook for two reasons: One being that this project would be too difficult with a span of multiple platforms and APIs, and the other being that Facebook is typically the largest platform for a given shelter, and it is the platform where they may be able to make the most detailed and relevant posts about their animals.

Facebook is a social media service built around a social network or social graph, where users and pages are “nodes” related to each other through all the various connections or “edges” between them. Facebook has several capabilities, from individuals or pages to posting to their own feed with text, photos, videos and polls, to live streaming video, creating groups, messaging, and much more. Many businesses and organizations have their own Page on Facebook which users can “like” in order to follow their feed. These pages also allow users to rate and review the business as well as make their own posts to the Page’s feed as visitors.

Facebook allows developers to use their framework through the Graph API, which is what I will be using for this project. I will use the Graph API to query the Facebook pages of animal shelters and traverse their photos and posts for announcements relating to the adoptable animals at their facility. That is the most base-level functionality for this project; if time permits, I would like to add functionality utilizing the Page’s location, allow for more specific and accurate searching/filtering of results, and including the business’s user rating. The searching and filtering of pages and results is the most important, so with any extra time I have I will likely focus on optimizing and toying with that capability.

The display will be simple, at its very least just displaying a feed of posts which in some way refer to new arrivals by a shelter manually indicated by the user, sorted by newest first and scrollable in a similar fashion to Instagram or Facebook’s own user experience. As time permits I will build on top of this, adding more key features and improving the design, but this will be the format at its core.

## Tentative development plan

1. Write a basic Python application for the Google App Engine environment that will use Facebook’s Graph API to query information about the Facebook pages of a few local animal shelters. This will involve requesting information such as the page’s name, description, location, hours, phone number, and of course their photos and videos. First, I just want to make sure it works.
2. After confirming that I can access the information, work on how I can filter & limit results. Mainly, investigate social medias of various shelters and begin to collect common keywords that may be used for the posts that specifically refer to new animals and things of that ilk. (I don’t want just a clone of their feed, I only want their posts about the animals available to adopt.) Focus on how to differentiate normal posts on the page’s feed versus the actual posts we want to see – it might be difficult, as the relevant posts might not have differentiating keywords.

Frankly, I feel like I need to get my hands dirty with the Graph API first and get a clearer idea of what I can and can’t do before I can truly outline the step-by-step development. These first two steps essentially make up the core of what my development will be based on, so all steps beyond that will basically just be continuing iteration and optimization off of that until I’m satisfied – or more likely, until I’m as close as I can get to satisfied. 😊

I hope I have been clear with what the minimum functionality of this project will be, and the various stretch goals I would like to accomplish on top of it. Please let me know if you have any questions!