Project Reflection

Agile Methodology

For our software development methodology, our group utilized the agile methodology. This means that we operated in two to three week sprints, with each member assigned a different task for the duration of the sprint. At the start of each week, we would either have a physical standup meeting or have a meeting over Slack. At the end of each sprint, we had a retrospective. We were fairly successful in implementing these features, however there were some parts of agile that were not implemented as well. One of these concepts is story points. When doing our sprint planning, we discussed the idea of assigning story points. However, due to our hard due dates for the milestones, and our inability to manage the customer such as may happen in a real agile shop, we decided that assigning story points to the cards were not worth it. What every sum of story points there was had to be done that sprint, and estimating them would not change that. Along that same idea, a key idea in agile is that the pace of development be sustainable for the long term. In our case, we found ourselves scrambling to implement the needed features for the given milestone, and couldn't necessarily go off of what a realistic velocity might be for a group of our size and experience level. Overall, our use of agile methodology was fairly successful within the limitations of a school group project.

Slack

Slack was our primary tool for day-to-day communication. One of the greatest features of Slack is its ability to organize our team conversations in both open and specific channels. From the very beginning of the project, we all agreed to install the Slack app on our phones in order to be reachable. As a result of that agreement, slack ended up being our primary means of communication within the team, to a pretty good degree of success. We never felt like anyone was "out of the loop" so to speak, and we were always able to coordinate our actions through Slack. Also, not just our messages, but all our files, images, PDFs, documents and spreadsheets can be dropped right into Slack and added with comments and stars. However, one of the few points of failure that we had with slack was that initially, not everyone was paying enough attention to it to get the messages. However, as time progressed, we all became more attentive to Slack. The advantages to using slack heavily outweighed the disadvantages. Slack was a nearly foolproof way to reach members of our team and have some sort of guarantee that they'd get the message. The disadvantages could really be considered limitations of any piece of technology, such as being unable to access slack due to lack of internet or lack of computer. Overall, slack made our group coordination much easier, and allowed us to be in near-constant communication.

Trello

Trello was the tool we used to manage the tasks of the project. From the first day we began developing BirdsI, we sat down together to brainstorm for ideas and elaborate on them. We put our vision and goals and started paving the way to accomplish them. We broke down tasks and put them into sprints within a specified timeframe to make the steps clearer and much easier. The cards feature was an effective way to organize each sprint. We had a card for each area of requirement such as the user, functional, non-functional, and product backlog. Once tasks are put into cards, each member on the team chooses a task to tackle depending on his or her expertise and background. Good thing is that although tasks have been distributed, teamwork was always there when someone needs help or run into a problem. To keep track of our work, a unique “in progress” card was made so that every team member is up to date on the process of the work and knows current status at any desired time. Since we were using the Agile methodology, we have to be going back and forth to develop and test and for that reason, we made a “testing” card. Slack was the main method to communicate and thanks to great features of Trello, we integrated it into Slack to keep our eyes on tasks and the workflow in general as soon as any update happens.

Github

Github was our primary means of source control, and as a result, was our go to place for storing our source code. At the start of the project, our use of Github was fairly minimal. This is because many members did not have much experience with the platform and were still learning the concepts of branching and pull requests. For example, for the first sprint, we did not have all of our feature branches created, and members were emailing code and not utilizing the tool. However, as the project went on, the Github usage increased, until we had the entire team branching and requesting code to be merged in. One feature we successfully utilized was the idea of a protected branch. In order to get the code merged into our master branch, the committing member had to submit a pull request from their feature branch into the master branch. Before this was accepted, another member had to go and perform a quick code review, and Github as a tool did not allow the merge unless the results of the code review had been submitted. Overall, our usage of Github can be summed up as mostly successful. In order to fully take advantage of this tool in the future, we might use more of the offered features such as issues or the wiki.

Google Drive

We often used Google Drive to work on various milestone documents, including this one. Any time our project required the collaboration of all of our writing efforts, we would use Google Docs. Before we started working on our final presentation, a Google Doc was created so we could pick what topic we would be presenting on and create an outline of what we would talk

about. For the presentation itself, we were able to use Google Slides so we could all collaboratively work on the Powerpoint at the same time and also have an idea of what everyone else was going to talk about in the presentation. Google Drive was used steadily throughout our project, and there were some advantages and disadvantages to our usage. Some disadvantages included how we were often prone to procrastination, and by the time some of us started to work on a Google Doc, a significant portion of the work had been done by some non-procrastinating members of the group. However, typically things worked rather smoothly, and Google Docs were a large part of our weekly meetings where we would all work on some documentation at the same time, being able to communicate with each other as we wrote out some information. Google Drive ultimately helped us work more efficiently, which helped our organization and flexibility.

Project Report

Accomplishments

Overall our work with BirdsI was quite successful. We came together as a team to develop a working product that satisfied many of the goals we set out to accomplish initially. For instance, we have done quite well in creating our website as a whole. The initial build was very rough, with unformatted figures that were blurry and oversized, and a very clunky feel. However, with some extra work we were able to produce a site that looks very crisp, and is very quick and easy to use. Furthermore we are very happy with our login system, which not only utilizes industry standard encryption to help ensure the safety of our client's login credentials, but also ensures that people who are registering are doing so with real email addresses and passwords that meet our requirements. Those being a minimum length of 8 characters, and including at least one lowercase letter, uppercase letter, and number. As far as the analytics aspects of our product, our implementation of the search bar (used to query keywords on twitter for analysis) is swift and simple, and provides the user with data that is well formatted and easy to understand. Also, the implementation of the open-source sentiment analysis supporting tool works efficiently and graphical visualization is one of the core feature that make BirdsI stand out. This is key to achieving our vision of helping companies better understand how they are seen.

Outstanding Issues

The outstanding issues with our project are relatively simple, and most come in the shape of functionality. Although we had initially planned to implement a system for tracking tweet sentiment across time, we were unable to do so in the span of time afforded to us. This is an outstanding issue that could be resolved with likely a couple of day's worth of work on integrating the website features with the database on a level deeper than just login information. Another outstanding issue that would likely require more work, is that our password system

seemingly sometimes refuses to work, disallowing a consumer from logging in. This issue would take longer to resolve, as it seemed to be inconsistent across machines, and we're not quite sure as to what the cause is. The last outstanding issue that might be considered is the fact that our scripts require some form of startup values on page load, otherwise they throw errors. This could probably be solved with a more advanced understanding of web development.

Future Plans

Our primary goal for the future of BirdsI is to ensure our current site and features are all as robust as possible. This is to ensure that our product can be enjoyed by anyone on any platform, including mobile devices. Along those lines, we are also aiming to produce a mobile app to be released first on iOS, and subsequently Android devices, to further simplify mobile useage. We hope that this will increase the popularity of our product, as it will give people the ability to look up keywords on the fly in case of an instance such as a PR emergency. Once we have ensured our current site can be utilized anytime, anywhere, we aim to include more features. One such feature is a history page, where someone can view previous queries of the same keyword in order to see more long term data with respect to what they are interested in. In order to do this, we will need to include a new database in our site, to avoid too many queries to the Twitter API we are currently utilizing. We are also doing research into alternatives to the current API that will allow us to pull even more data so that we can deliver the best information possible to our consumers. One of the methods could be keeping track on the most popular/trendy keywords, e.g. name of a product, a new brand, or a new start-up company and store them into our database so that the query time could be optimized.