

Fulqrum

Project Backlog

Github: <https://github.com/osterhagen/Fulqrum>

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Problem Statement

Owning a small business is tough. Having to work days and nights on building a business leaves little time to research customer trends, analyze product likeability, and examine customer feedback, all of which are essential elements of executing a business model. Fulqrum is a free to use, customer service analytics tool for small business owners that allows them to analyze customer feedback, see what other local businesses are doing right, and help them scrutinize products, all in an easy to use web application.

Background Information:

Problem, domain, targeted users

Websites such as Google, Yelp, Facebook, and Uber Eats allow people to make honest reviews about a company, and provide useful customer feedback to businesses. However, evaluating reviews and customer feedback at scale, across all of these platforms, is a time consuming task for small business owners. If they try to use some of the more conventional customer service tools that larger companies use, not only would they have to afford all the costs and learn all the relevant technologies, but also, these tools still don't provide any insights into what the improvements could actually be, they just give the data, not the analytics.

Similar Platforms

Although companies such as Salesforce provide customer service analytics for companies, their service can be more expensive and difficult to use for small business owners, which means that the barrier for entry into customer service analytics tools can seem intimidating. We believe our service will lower that barrier by offering our service for free, and providing easy to understand insights.

Limitations

While many of these platforms help make customers and their feedback more readily available, such as Yelp, they lack useful insight at scale. Many of these platforms leave a

small description of a business such as “great for cocktails” and a star rating to average out customer reviews. However, our product stands out by using NLP (Natural Language Processing) to recognize trends in sentiment over all reviews, and provide direct statistical comparisons to a business’ competitors. For example, Salesforce can help you find leads for customers and expand your presence, but it can't tell you what other businesses in your local area are doing well, and it won't tell you what you could do better.

Functional Requirements:

1. As a user, I would like to be able to create an account.
2. As a user, I would like to be able to sign in to my account.
3. As a user, I would like to be able to select a business category (i.e. restaurant, tech company) in the search bar.
4. As a user, I would like to be able to see the analysis of my search in terms that someone without a technical background can easily understand.
5. As a user, I would like to be able to see what keywords showed up in reviews about me.
6. As a user, I would like to be able to see what specific reviews were positive and negative about my company.
7. As a user, I would like to be able to filter reviews by source.
8. As a user, I would like to be able to log into my account and easily see updated analytics about my company on the home page.
9. As a user, I would like to be able to see account notifications about the most recent updates on my business’ analytics page.
10. As a user, I would like to be able to receive email notifications.
11. As a user, I would like to be able to compare my business to local competitors on a single page.
12. As a user, I would like to be able to see analytics about my competitors.
13. As a user, I would like to be able to select my search radius by distance.
14. As a user, I would like to be able to filter my search by popularity and rating.
15. As a user, I would like a contact email to notify the developers of any bugs or errors.
16. As a user, I would like a step by step tutorial on how to use the software.
17. As a user, I would like to be able to switch views between a list of competitors and a map view of competitors.
18. As a developer, I would like user feedback.
19. As a developer, I would like users to have the option to change their primary email and passwords.
20. As a developer, I would like users to be able to press an update button, so that new information about the company’s most recent insights are uploaded to the company page.

21. As a developer, I would like users to have a checkbox to enable/disable email notifications
22. If time allows as a user, I would like to be able to see how my company has performed in different time periods: past week, one month, three month, one year, and five year performance insights.

Non-functional Requirements:

1. The system must be able to handle 100 users at once.
2. Must be able to make instantaneous updates on business insights.
3. The maximum amount of allowable downtime per month is one hour.
4. The website must be simple to use and provide statistics and NLP sentiment insights in non-technical and straightforward terminology.
5. The site responsiveness should be as fast as possible.
6. The site's backend system (Heroku) will be able to store user information and be able to constantly update the queries with new and improved information.
7. NLP sentiment analysis will be applied over text in spaCy and keras in Javascript using two existing open-source github repos: [spacy-nlp](#) and [keras-js](#).

Project Backlog->

- Make more clear and add project objectives
- So we can make a good backlog
- Each objective should be mapped to certain user stories
- Be very specific and concise
- Mention salesforce and their limitations
 - Talk about for background information
- Requirement: functional: user stories function requirements
 - Non functional: talk about grabbing data, might be in dif formats
 - Security, user cant access info

Compressed into 1 line the problem statement

Comprehensible by a normal person-> don't need to be a specialist, can be understood by a normal person, we tell you how to understand the results

Project charter-> grab info, mention how to efficiently process requests
Either explain what processing means
Narrow keywords
Mention analysis
Be very precise
Profile not Image
Can give examples
Should have whole framework in mind
(deliverables) - after analysis, deliver as API

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Project Objectives

- Grab information from many sources (yelp, techcrunch, twitter, etc.) and be able to process the text from all efficiently
- Scrape titles and bodies of text from a number of readily accessible websites by developing a web scraper.
- Perform analysis over large bodies of text to generate an image of the public opinion of the query by applying NLP (Natural Language Processing) techniques.
- Allow users to search and find businesses within a specific category, and analyze multiple sources efficiently

Stakeholders

- Users: Primarily small business owners, but any person may use the application for their own purposes.
- Developers: Connor Borzello, Thomas Huang, Michael Quade, Omar Raza
- Project Manager: Omar Raza (Team Leader)

Project Deliverables

- A web app that allows users to search a business and certain keywords, select a business category, and instantly retrieve insights on public opinion.
- NLP sentiment analysis applied over text in spaCy and keras in Javascript using two existing open-source github repos: [spacy-nlp](#) and [keras-js](#)
- Backend system (Heroku) that can store user information and be able to constantly update the queries with new and improved information