Proposal

Glow Gatherer Web Application

Nimmi Suri
Aaliyah Brown
Talia Berler

Advisor: Vanessa Aguiar

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Software Engineering course project

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Preface

This is a proposal for a web-based application project, Glow Gatherer, for partial fulfillment of the requirements of a Software Engineering course (CSC431) project in the department of Computer Science at the University of Miami.

This proposal provides the scope and context of the project to be undertaken. It details the intended user group and the value that the system will have to them.

The intended audience of this document is the course professor and teaching assistants so that they can determine whether the project should be approved as proposed, approved with modifications, or not approved.

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1.0 Overview

1.1. Purpose, Scope and Objectives

The purpose, scope, and objectives of the project involve catering to companies selling commercial beauty products, specifically targeting beauty brands and firms seeking insights into customer satisfaction. A current example of this type of application is “Good on You” which is a web app used to gather the ratings on different clothing brands based on sustainability and good environmental and labor practices. The intended user group mostly comprises beauty companies, but consumers may also use it to find beauty products worth purchasing.. The application will operate as a web-based platform, which means it needs hardware (any web searching device that can connect to the internet), software including Python [1], web scraping libraries like Matplotlib [2] and PRAW [3], and sentiment analysis through VADER [4] (Valence Aware Dictionary for Sentiment Reasoning) which provides sentiment scores based on word usage. Also, data storage will require MySQL [5].

1.2. Project description

We will develop a web-based application where Companies that need constant feedback on their products can see how well they are succeeding on the market. Using the website, companies and consumers will be able to search different brands and their products to get a full detailed feedback on them based on product reviews posted on social media platforms (e.g reddit). Our application will implement services to help with brand monitoring: “the act of collecting and measuring mentions of your company or brand across as many channels and touchpoints as possible – with a view to turn them into useful data.”, customer feedback: “Customer feedback is the information, insights, issues, and input shared by your community about their experiences with your company, product, or services. This feedback guides improvements of the customer experience and can empower positive change in any business — even (and especially) when it's negative.”, product launches: a coordinated attempt to introduce a new product to the market, and competitor analysis: “process of identifying, evaluating, and understanding the strengths and weaknesses of competitors in a particular market or industry.” All features of the application will be written using Python and mySQL to store all the data pulled from Reddit using the Reddit web-scraping tool PRAW. We will use VADER, a natural language toolkit or NLTK, for sentiment analysis to analyze information in text. To make the website UI look more appealing, CSS [6] will be used to design it. Figma [7] will be used throughout the process to visualize what the interface will look like before any major changes are implemented.

References

[1] Python: https://www.python.org/

[2] Matplotlib:https://matplotlib.org/

[3] PRAW: https://praw.readthedocs.io/en/stable/

[4] VADER: https://www.analyticsvidhya.com/blog/2021/06/vader-for-sentiment-analysis/

[5] mySQL: https://www.mysql.com/

[6] CSS:https://www.w3schools.com/css/css_intro.asp

[7] Figma: https://www.figma.com/