Crystal Advanced Analytics
(Future-Oriented Benchmarking through Social Media Analysis)
Progress Evaluation for Milestone 6

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Faculty Sponsor: Dr. Philip Chan, pkc@fit.edu

Client: Dr. Richard Griffith, griffith@fit.edu - *Department of Psychology*

Sponsor meetings: March 19th, 2018
                                   April 2nd, 2018
                                   April 16th, 2018

Client meetings: March 16th, 2018
                                   March 21st, 2018
                                   April 13th, 2018

Task	Completion	Harshil	To do
Improve Root Cause Analysis	100%	100%	None
Complete Website	100%	100%	None
Complete E-book page	100%	100%	None
Create Demo Video	100%	100%	None
Create User Manual	100%	100%	None

Discussion of each accomplished task for current milestone:

Task 1: I Improved the root cause analysis following the discussion with Dr. Chan during our meeting on April 2nd, 2018. The root cause analyzer compares the 2 sorted arrays; one with negative sentiment values reviews and the other with positive sentiment score values reviews. It then identifies most frequent words in both arrays. If for instance, a word X occurs 10 times out of 100 reviews in positive sentiment array, and 5 times out of 100 reviews in negative sentiment arrays, word X will make up 5% of the root cause for a good performance. This 5% is obtained by taking the occurrence $\frac{10}{100}$(positive sentiment) - $\frac{5}{100}$(negative sentiment) which results in $\frac{1}{20}$ or 5% and vice versa. In instances where a word occurs on the same frequency in both arrays, it will cancel out and will be discarded from the results.

Task 2: The website was successfully completed. It has all the different components and tools that was initially set as the goals and objectives of this project. The website has it's landing page, the authentication (Sign in, Sign Up, Forgot Password) components, and the main dashboard. The Dashboard comprises of a service overview component where the user will have an overview of his business performance, such as average customer satisfaction, average ratings, average sentiment score, among others. The dashboard as well has a monitor reviews component, where the user can get an insight of his reviews' data, such as total reviews, new reviews, percentage growth, as well as allowing the user to view original reviews and comments by customers.

The Dashboard's competitor analysis tool comprises of the benchmarking tool which allows the user to compare his business to that of his competitors. The user has the option to filter the date and select which competitors he would like to benchmark to as well as adding a competitor of choice.

The Advanced Analysis tool of the dashboard has the sentiment analyzer which provides the average sentiment score of the business and its different services. The sentiment score was normalized to a scale of 0-100 as oppose to -1 to 1 for a more comprehensive understanding of the results. The Advanced Analysis tool also has the root cause analysis tool which allows the user to identify the root cause for an under performance or an over performance. The User has the option to select a date range and specify a sentiment range for which he would like to view the results.

The Dashboard as well has a Help option, where the user can view tutorials on how to use the Dashboard and a Contact Us option so that users can reach out in case they have any issues or concerns.

Task 3: The E-book page was successfully completed. The E-book page contains an abstract of the project, an overview and description of the main features of the project, the challenges faced during the implementation of the project and a conclusion. It also has some graphs representing the results and an overview of the landing page.

Task 4: A demo video of the project was successfully created which provides an overview of the project. The video covers the problems that the project solves, the approach and the different features of the project. The video was created using PowToon and has been published on a [YouTube](#) channel.

Task 5: A user manual was successfully created. The user manual provides guidelines on how to use the system. It includes snapshots of the dashboard and description of the different components. The user manual covers:

- Intended Users
- Registration, Sign in and Forget Password
- Graphs and Charts explained (results)
- How to add competitors
- Filtering (Sentiment score, date range filter, Categorization of reviews)
- Root Cause Analysis
- Sentiment Analysis
- Troubleshooting

Lessons Learned

- I believe anyone can achieve whatever they set their mind to with dedication, hard work and persistence.
- Work with an advisor that supports you, recognizes your hard work and encourages you throughout. Having an advisor that doesn't acknowledge and discards any of the efforts or progress being made can be detrimental at various levels.
- People's criticism is only a reflection of their own insecurities, which at no means define you.
- Time management is vital. Setting personal deadlines and goals are always really helpful to stay on track.

Sponsor feedback on each task for current Milestone (M6):

Task 1:

Task 2:

Task 3:

Task 4:

Task 5:

Sponsor Evaluation

● Sponsor: detach and return this page to Dr. Chan (HC 322)

● Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Harshil	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Sponsor Signature: _____ Date: _____