ENVISIONING

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STAKEHOLDER ANALYSIS

GENERAL STAKEHOLDERS

Stakeholder	Type of Stakeholder	Role
The Marketing Agency	Primary	Designs custom advertising campaigns for its clients. The results on the overall performance of a specific campaign will help them determine which features to use in the future.
The Clients	Primary	The clients of the marketing agency will use our application directly, it helps them evaluate the success of their advertising campaigns.
Developers	Facilitating	We shall develop the application.

SPECIFIC STAKEHOLDERS

Stakeholder	Stakeholder Type	Role/Description
CEO of Marketing Agency	Secondary	The person in charge of making important decisions and communicating those decisions to the developers.
Head of Communication of Marketing Agency	Primary	Person in charge of communicating and helping clients with their needs. They will be in charge of distributing the software developed (thereby using the system).
Campaign Design Team	Tertiary	People in charge of taking a specification and producing a campaign. The data received from the use of our tool will allow them to improve campaigns in the future to work with changing trends.
Campaign Manager of a Client	Primary	The person in charge of conveying essential aspects of the desired campaign, and in charge of keeping track of the campaign itself.
Sales Manager of a Client	Primary	The person in charge of improving profits for their company. They will want to keep track of trends so that future endeavors result in a greater gain.
Developers (Us)	Facilitating	Responsible for the development of the application

PERSONAS

CEO

Harold, 32, is the CEO of the marketing agency. He used to be a web developer before seeing potential in the online marketing industry. He worked his way up the ladder until he reached the position he currently resides in. His job means that he is heavily involved in communicating with external businesses that may be able to benefit his own organisation.

His colleagues joke that he may take his job too seriously but he doesn't see it that way. He aspires to improve the ways that his own clients can view the state and success of their advertising campaigns through more up to date means.

He believes using improved methods to display key metrics of a campaign can greatly help companies make informed decisions. The fact that he is colour blind also gives rise to his desire for more accessibility features in modern tools.

By improving his clients experience, he hopes to expand his companies success and to lead the industry into a future of easy to manage and successful advertising campaigns.

HEAD OF COMMUNICATION

Derek, 57, is the Head of Communication of the marketing agency. He has been with the company for many years, and is well respected in his position. He has worked in the technology field for years, and understands the importance of secure data. His job is to ensure that the marketing agency's clients achieve the desired success from their advertising campaign, and communicates requirements of the client down to his campaign design team. As the employee who overviews their clients ad campaigns, he is very aware of the importance of graphical representation of complicated statistics that aid with the understanding of data.

Derek has two grown up children who have all graduated university, and he enjoys the quality time he gets to spend with his wife. He is looking forward to being able to retire in a few years time and use his savings to travel the world with his wife. He enjoys photography as a hobby and hence appreciates clean aesthetics.

MEMBER OF THE CAMPAIGN DESIGN TEAM

Kiara, 24, is a hard-working woman who has recently been employed by the company. However, she loves her new job and really enjoys developing designs while learning how to use different tools.

She is currently working on three different projects with two different design teams. She enjoys working with her team members and different ideas. However, Kiara is often conflicted about which design ideas will garner the most success, and sometimes the workload and the time pressures make it difficult to try a range of ideas and make the 'right choices'.

She is very creative in nature and would prefer the use of visuals and graphs for the display of the statistical information.

Kiara hopes that our tool will help her and her teams identify which advertising campaigns have been the most successful. This will help them develop better campaign designs in the future.

CAMPAIGN MANAGER OF CLIENT

Lucy, 27, is the campaign manager for the client and her job is to communicate what the company wants from the advertising campaign to the third party agency they have hired to bring it to life. She is very keen on numbers and results from her campaigns in order to see whether it has captivated her target audience.

Before that she was just a normal secretary, but her qualifications encouraged her to make changes in life. Lucy has a Diploma in Professional Marketing and now she is developing her management skills. She also has improved her communications skills, and project management skills whilst staying within a budget.

Lucy is in very good relations with her colleagues, she is open-minded tolerant and really funny. She knows exactly what she wants from the campaign, that is why Lucy invests all her efforts in the job. All the people around her love her jokes and sarcasm. These sides of her character help her team to be more united.

Lucy dreams one day to open her own company and develop her ideas and help people to accomplish their ideas too. Overall,

SALES MANAGER OF CLIENT

Joanne, 54, is a Sales Manager working for a small company trying to expose their product on the internet. She doesn't have many documented qualifications but has been working within sales for a long time and has amassed a lot of experience across this time. She lives alone with just one child who is 17 now.

She sometimes finds it very frustrating to use technology but believes it is a must for the company to embrace it and advertise using it. Therefore she works hard at improving and tries to encourage a lot of her colleagues to do the same. She gets on very well with her colleagues and they create a strong team within the sales department.

Finally her personal objective is to keep improving her technological skills and sales margins as each year progresses, she hopes this new tool will help with this and is excited to see what she can do with it.

	her thinking is very positive.	

USER STORIES

RED user stories represent MUST

YELLOW user stories represent SHOULD

GREEN user stories represent COULD

Requirement	User Story
1 - Loading CSV Files	As a Campaign Manager of a small business, I want to be able to load in the CSV files so that I can analyse the data from a clear dashboard.
2 - Detect invalid data in the CSV files when parsing	As a Campaign Manager of the Client I want to be able to avoid invalid data early on so that the performance metrics illustrated by graphs and charts are accurate.
3 - View number of impressions	As a Campaign Manager of a small business, I want to be able to view the number of impressions so that I am able to see the outreach of the advertising campaign.
4 - View number of clicks	As a Campaign Manager of a small business, I want to be able to view the number of clicks so that I can see how effective the advertising campaign is at drawing attention from the users.
5 - View number of uniques	As a Campaign Manager of a small business, I want to be able to view the number of unique clicks so that I am able to get a better understanding of how many people are interacting with the campaign.
6 - View number of bounces	As a Campaign Manager of a small business, I want to be able to view the number of bounces so that I can see how effective the advertising campaign is at keeping the attention of the users.
7 - View number of conversions	As a Campaign Manager of a small business, I want to be able to view the number of conversions so that I measure the success of the advertising campaign.
8 - View the total cost	As a Sales Manager of a small business, I want to be able to view the total cost of a campaign so that I can see how much was spent on the campaign.
9 - View the click through rate (CTR)	As a Campaign Manager of a small business I want to be able to view the click through rate of the campaign so that I can tell how effective the advert was at captivating users.
10 - View the CPA (Cost per acquisition)	As a Sales Manager of a small business I want to be able to view the cost per acquisition of the campaign so that I can determine the average profit of the campaign.
11 - View the CPC (Cost per click)	As a Sales Manager of a small business I want to be able to view the cost per click of the campaign so that I can see the average cost it took to gain the attention of a single user.
12 - View the CPM (Cost per thousand impressions)	As a Sales Manager of a small business I want to be able to view the cost per thousand impressions so that I can view the average required cost taken to gain the attention of a large number of people.
13 - View the Bounce Rate	As a Campaign Manager of a small business I want to be able to view the bounce rate of

	the campaign so that I can see the average number of people who were initially interested but lost interest soon after.
14 - The system should be able to display key metrics over time	As a Campaign Manager of a small business I want to be able to graph the data over time so that I can see trends and evaluate which time intervals are most effective for our campaign.
15 Ability of the user to control the time granularity of the time charts	As a Campaign Designer of a small business I want to be able to control the time granularity of the graphs so that I can evaluate the data and see trends over different periods of time to improve future campaigns.
16 - Display a histogram of the click costs	As a Sales Manager of a small business I want to be able to view some data in a histogram format so that I can more easily evaluate the data using a visual representation.
17 - Display a histogram of the click costs (showing the distribution of costs) per thousand impressions	As a Sales Manager of a small business I want to be able to view click costs per thousand impressions so that I can more easily evaluate whether the cost incurred through a campaign is suitable compared with its number of impressions.
18 - Filter the metrics and charts by date range	As a Campaign Manager of a small business I want to be able to filter the metrics and charts by date range so that I can easily locate data about different periods of time.
19 - Filter the metrics and charts by audience segments	As a Campaign Manager of a small business I want to be able to filter the metrics and charts by audience segments so that I can see how different groups of people reacted to our advertisement campaign.
20 - Filter the metrics and charts by context	As a Campaign Manager of a small business I want to be able to filter the metrics and charts by context so that I can get specific information about the success of an advertising campaign.
21 - Directly compare metrics or charts with different filters applied to them	As a Campaign Manager I want to be able to compare numerous metrics and charts side by side with different filters applied so that I can compare different data to discover trends and contrasts.
22 - Define how a bounce is registered	As a Campaign Manager I want to be able to define how a bounce is registered so that I can determine the number of bounces based on what I deem to be a bounce.
23 - The software should be fast and responsive	As a Campaign Manager of a small business I want the software to be fast and responsive so that I can get my work done efficiently and become less frustrated due to waiting for results.
24 - Load and compare data from multiple campaigns	As a Head of Communication of the Marketing Agency I want to be able to load data from multiple campaigns so that I can compare the effectiveness and success of different advertising campaigns that my agency has made.
25 - Display performance metrics per time of day or per day of week	As a Campaign Manager of the Client I want to be able to display performance metrics on a chart per time of day or per day of week to visualise the effectiveness of a campaign at different times.
26 - Save summary charts to an image or pdf file	As a Head of Communication of the Marketing Agency I want to be able to save summary charts to a file so that I can keep it for records and distribute them to interested parties.

27 - Print summary charts	As a Head of Communication of the Marketing Agency I want to be able to print summary charts so that I can keep hard copy records and for presentation purposes.
28 - Customise the appearance of the application	As a Head of Communication of the Marketing Agency I want to be able to customise the appearance of the application so that I can use the application despite mine or my client(s) visual impairments.
29 - Ability of the system to identify outlier values	As a Campaign Manager of the Client I want to be able see outlier values on charts so that I can easily identify data points that may skew the plots.
30 - A main GUI Interface with clear instructions on how to use it	As a Campaign Manager of the Client I want to use a GUI interface that is easy to use, and has clear instructions that explain how to utilise all of its features so that it takes me and my peers minimal time to learn how to use them.

DELIVERABLES

Our deliverables are prioritised based on the current sprint. For example a MUST in the whole project may just be a SHOULD in sprint 1.

DELIVERABLE 1	DELIVERABLE 2	DELIVERABLE 3
Requirement 1	Requirement 18	Requirement 21
Requirement 2	Requirement 19	Requirement 24
Requirement 9	Requirement 20	Requirement 28
Requirement 10	Requirement 22	Requirement 29
Requirement 11	Requirement 16	Requirement 30
Requirement 12	Requirement 17	
Requirement 13	Requirement 25	
Requirement 3	Requirement 26	
Requirement 4	Requirement 27	
Requirement 5		
Requirement 6		
Requirement 7		
Requirement 8		
Requirement 14		

Requirement 23
Requirement 15

SPRINT BACKLOG FOR DELIVERABLE 1

Related Requirements	Summary of Task	Estimated Task Size
	Design relevant UML diagrams	Medium
	Code simple GUI	Small
1,2	Code functionality for loading CSV files	Small
	Code functionality for parsing data from files	Large
9	Code functionality to view CTR	Extra-Small
10	Code functionality to view CPA	Extra-Small
11	Code functionality to view CPC	Extra-Small
12	Code functionality to view CPM	Extra-Small
13	Code functionality to view Bounce rate	Extra-Small
3	Code functionality to view number of Impressions	Extra-Small
4	Code functionality to view number of clicks	Extra-Small
5	Code functionality to view number of uniques	Extra-Small
6	Code functionality to view number of bounces	Extra-Small
7	Code functionality to view number of conversions	Extra-Small
8	Code functionality to view the total cost	Extra-Small
14	Code functionality to display chart of key metrics	Medium
15	Code functionality to control time granularity of charts	Medium

DAY ZERO BURNDOWN CHART

This image shows the first column of our burndown chart that we have created on a shared google sheets document. It represents the tasks that we intend to do during sprint 1 of our project

Over the course of the first sprint we shall add to each day of the burndown chart to represent the progress we are making.

Code functionality to control time granularity of charts
Code functionality to display chart of key metrics
Code functionality to view the total cost
Code functionality to view number of conversions
Code functionality to view number of bounces
Code functionality to view number of uniques
Code functionality to view number of clicks
Code functionality to view number of Impressions
Code functionality to view Bounce rate
Code functionality to view CPM
Code functionality to view CPC
Code functionality to view CPA
Code functionality to view CTR
Code functionality for parsing data from files
Code functionality for loading CSV files
Code simple GUI
Design relevant UML diagrams

Day 0

Risk Assessment

Risk	Probability (1 low - 5 high)	Severity (1 low - 5 high)	Risk Exposure E = P * S	Mitigation
Team Member Turnover/ someone becomes unavailable	1	3	3	Keep in contact with all team members through the various social media communication channels we have set up. Contact the lecturer and supervisor to inform them as soon as possible. Finally, we may need to edit burndown charts and other planning tools in order to reflect the new situation.
Management change(Priorities in increments change)	4	1	4	Organise SCRUM meeting as soon as possible to discuss new strategies, from this update burndown chart, increment plan and mention it in the report.
Lack of communication and coordination in the team.	2	4	8	Make sure all communication channels have been successfully set up and that every team member is equally involved. Communicate current progress frequently with the rest of the group.
Lack of experience with JavaFX or Java Swing	4	3	12	Read and learn documentation for JavaFX and make sure you ask other members of the team for help/support if needed.
Disputes/ Disagreements within the team	2	2	6	Calmly talk about the problem, analyse it and weigh up both sides in order to make an informed decision.
Productivity issues (long timelines/ inability to stick to plan)	3	4	12	Stay on top of the work and make sure other team members are aware of the progress you have made. Don't hesitate to ask other members of the group for help/clarification.
Application requirements change	1	5	5	Organise a SCRUM meeting as soon as possible to discuss the new plan, also include it in the report.
Compromise on designs, software development	2	3	6	Meet up and discuss what everyone's beliefs are and then come to a conclusion where everyone is satisfied.
Specification delays	1	5	5	Contact supervisor or lecturer in order obtain some instructions on what to do next.
Focusing on additional features instead of main functionality	2	4	8	Discuss with the team what you are working on at all times and make sure you stick roughly to our increment plan to make sure you are fulfilling the specification..

Underestimating the difficulty in implementing functionality.	2	4	8	Make sure you check the estimated task size before you start building the task in order to make sure you know roughly how long it should take so you plan accordingly.
Final application fails upon execution.	1	5	5	As you go along make sure you check it is all working and communicate this with the group. However if it does happen then meet up as a group in order to debug the program.
Lack of communication with our supervisor/ client.	2	4	8	Consistently stay in contact on a weekly basis via email/social media or in person. Make sure we are doing everything to organise meetings.
A component of the application fails.	2	4	8	Try debugging the program but if you struggle then contact the rest of the group in order to get some help on fixing this.

Summary of Methods

We used Slack in order to communicate with each other. We chose this because we could also communicate with our supervisor in another channel. Alongside this we also used Facebook Messenger for informal communication within our group to organise scrum meetings. When it comes to envisioning and increment reports, we chose google docs to work collaboratively on one document in order to maximise efficiency and to allow us to easily share ideas. We have also set up a git repository so that we could easily collaborate on the programming side of the project. It allows us to work on our separate segments and to easily build them up. Before we start our programming we also are planning to use GitKraken, a git GUI, as an agile tool to access our github repository and use GitKraken's glo tool to distribute tasks from each increment plan.

We will be holding scrum meetings 3-4 times during the week to quickly communicate our progress, clarify any doubts and ask each other for help if needed. We have chosen a scrum leader, who will maintain brief notes on the points discussed after each scrum meeting, assign responsibility to each team member and regularly communicate with our supervisor.

In addition to having planned a product backlog and a sprint plan for each increment, we have decided to use a number of agile practices such as pair programming and refactoring while developing our application, to make sure we can easily integrate our code to deliver a system of value for each increment. We are also planning to employ test driven development before implementing particular parts of the application, to minimise bugs and make the code easier to maintain and understand. We will keep our customer (supervisor) informed about our progress and design approaches throughout the project, and utilise his feedback to alter and develop our application accordingly.