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COMP3850 Project Deliverable Certificate

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Rubric stream being followed for this deliverable (highlight one) *Note: the feasibility study has the same rubric for all streams.*	SOFTWARE Rubric *GAMES Rubric* *CYBERSECURITY Rubric* *DATA SCIENCE Rubric*

We, the undersigned members of the above Project Group, collectively and individually certify that the above Project Deliverable, as submitted, **is entirely our own work**, other than where explicitly indicated in the deliverable documentation.

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NB: please write all details clearly (if handwritten).
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List of tasks completed for the deliverable and activities since last deliverable certificate with totals for each individual team member and whole team

Performed by *(Student Names)*	Duration *(hrs)*	Complexity *(L, M, H)*	Name of task	Checked by *(Initials)*
All members	0.5		Sponsor zoom meeting 9/03/2022 to clarify the project definition	
	0.5		Sponsor zoom meeting 4/03/2022	
	1		Weekly Team meeting	
	1		Weekly Team meeting	
Total	7.5			
Erik Horvath	2.5	M	Research	
	3	M	Writing report section 5 (alternate solutions)	ST
	2	M	Proofreading and editing the whole feasibility report.	
Total	7.5			
Sepehr Torfeh Nejad	3	M	Research for D1	
	3	M	Writing report sections 2 and 6	LT, EH
	1	M	Set up planner and tasks	LT
Total	7			
Rojwal Shrestha	2	M	Research for D1	
	3	M	Writing report section 4	LT
Total	5			
Marcus Ikeda	2	M	Research for D1	
	3	M	Writing report section 3	LT
Total	5			
Lance Te	0.5	M	Set up our Discord, Google Drive, GitHub	ST
	2	M	Introduction for the report	EH, ST
	3	M	Final proofread and edit of the report	
	1	M	Formatting the final report for submission	All
Total	6.5			
Team Total	38.5			

Feasibility Report

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FÆTHM

Contents

Introduction

As the internet user of today has become increasingly accustomed to products and services being provided on-demand, the need and expectation for convenience and ease through personalisation is a vital consideration for any modern online business. Users expect tailored products and services that cater specifically to their needs, and businesses risk losing customers if they do not provide this experience.

For a web application, this means that the user interface (UI) and user experience (UX) must be at the forefront when building out the application. The UI provides users with the ease to navigate and interact with the app while the UX provides the convenience and personalisation required. An intuitive UI and well-designed UX will work seamlessly, and often go unnoticed, to deliver a frictionless experience to the user.

Indeed, personalisation is no longer a luxury but what users expect and demand.

Problem Statement

When a user signs into the Faethm application, they are directed to a generic dashboard that does not necessarily cater to the user's specific needs. This can result in a less-than-intuitive experience for the user as they are required to browse to find what would be relevant to them. To enhance the user experience, our solution should provide a tailored experience with a personalised dashboard that aligns with their use case. Thus, the nature of this project is a **software development project**.

Opportunities

The opportunities Faethm stands to realise are inherently linked to users of their platform. These fall under two umbrella categories: customer satisfaction and customer insight.

Customer Satisfaction

Adding extra elements of user personalisation to the app enables the prediction of a user's needs, allowing the algorithm to anticipate and provide useful resources. This greatly enhances the user experience and achieves user satisfaction which has numerous knock-on benefits.

- Satisfied customers believe in the brand and, in time, become **loyal customers**. These customers form a core revenue stream and provide repeat business. Having a solid base of loyal customers also reduces customer churn.
- Retained loyal customers often become advocates for the business which are crucial in **brand building**. Advocates give credibility to a business' brand reputation and popularity.
- Building a strong foundation of advocates helps **reduce marketing expenses** as their word-of-mouth can help acquire new customers.
- In competitive industries, customer satisfaction offers a layer of **differentiation from the competition**. As customers increasingly seek seamless experiences online, businesses that can meet this demand are well positioned to thrive.

Customer insight

Personalisation requires gathering user information. This information, combined with user meta-data, offers greater customer insight for the business. A feedback loop process enables the business to use this meta-data to refine the level of personalisation achieved, which in turn can promote greater customer satisfaction.

Mandates

There are no mandates, statutory or managerial, that requires this task to be done.

Success Factors

Overall, success within a team is made possible when there is a clear vision shared by all team members, a strong team leader, and tasks allocated appropriately according to the team's abilities. It is important to complete tasks in a timely manner so no member is hindered in their work and deadlines are met. In case of any problems, members should be able to communicate openly and honestly and give or receive help when needed.

Comprehensive Plan

Failing to plan is planning to fail. While a project may seem overwhelming, breaking the project down into smaller parts and assigning them to individuals makes each task manageable. It is important that appropriate deadlines are set and that tasks are completed within a reasonable timeframe.

A clear understanding of the project is essential. This needs to be instilled, and any misunderstandings clarified, from the beginning of the project to ensure team members start on the same page. Clearly articulating goals and having a detailed plan will help team members continue on the same page towards the project's completion.

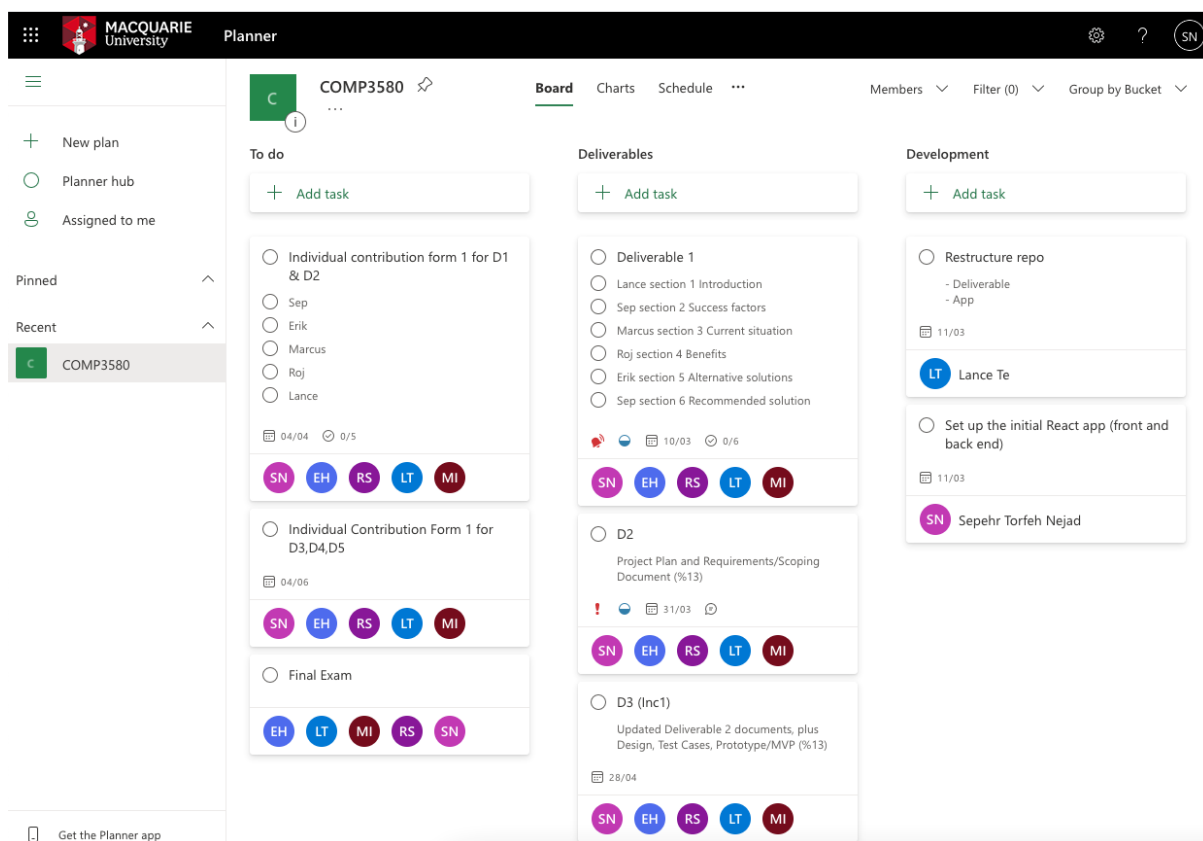Our group uses Microsoft Planner to succeed!

Figure 1 Screenshot of the team's Microsoft Planner

Team Leader

A good team leader is someone who has a good relationship with the team members and can encourage open communication between team members. If the team loses motivation, it is the leader's responsibility to motivate the members by giving enthusiasm and encouragement. In the event that team members do not handle their share of work effectively, reinforcing responsibilities and teamwork is also the leader's task.

Open Communication

When there are more than two people in a group, communicating between the members can be more challenging. These challenges can be overcome by establishing a transparent, candid, and supportive environment that encourages open communication. This is crucial as the success of the project relies on consistent communication to ensure every member is kept in the loop. An added benefit of this environment is the built-in trust that forms between members that enables constructive criticism to help each other improve.

Risk Management

Every project has risks. While some risks cannot be eliminated, having a risk assessment is a good first step. This involves identifying the risk, deciding who might be affected, and assessing the severity of the risk. Having a plan to resolve these possible risks will prepare the team for when an incident occurs which ensures the negative effects are mitigated.

These risks are not always avoidable but by having a plan set in place, team members will be better equipped to deal with the situation, which ultimately provides a better resolution for the project.

Context

Current Situation

Faethm's analytics platform currently allows businesses to uncover the threats posed to their workforce by emerging technologies. By utilising the data that is given to them by their clients, and combining it with the research that they have done on future trends of work, they can best help their clients in keeping their skills up to date. The current onboarding process for new users signing up with Faethm is in need of improvement and it is strategically important for the company to set a strong standard for user experience to maintain client retention. To achieve this, Faethm requires us to enhance their onboarding application by improving their First Time User (FTU) experience. Faethm has provided us with several personas that represent a set of goals which each represent a subset of their clients. Each of these personas are used so each user has a dashboard that is personalised to them and they are only given information that is relevant to them. Currently, a persona needs to be manually assigned to each new user so we have been asked to implement a survey to be prompted on a user's first login to the platform. This survey is to collect information about the new user, and what they intend to use the Faethm platform to achieve, then based on the answers, automatically assign them a persona which should match up with their goals and how they plan on using Faethm.
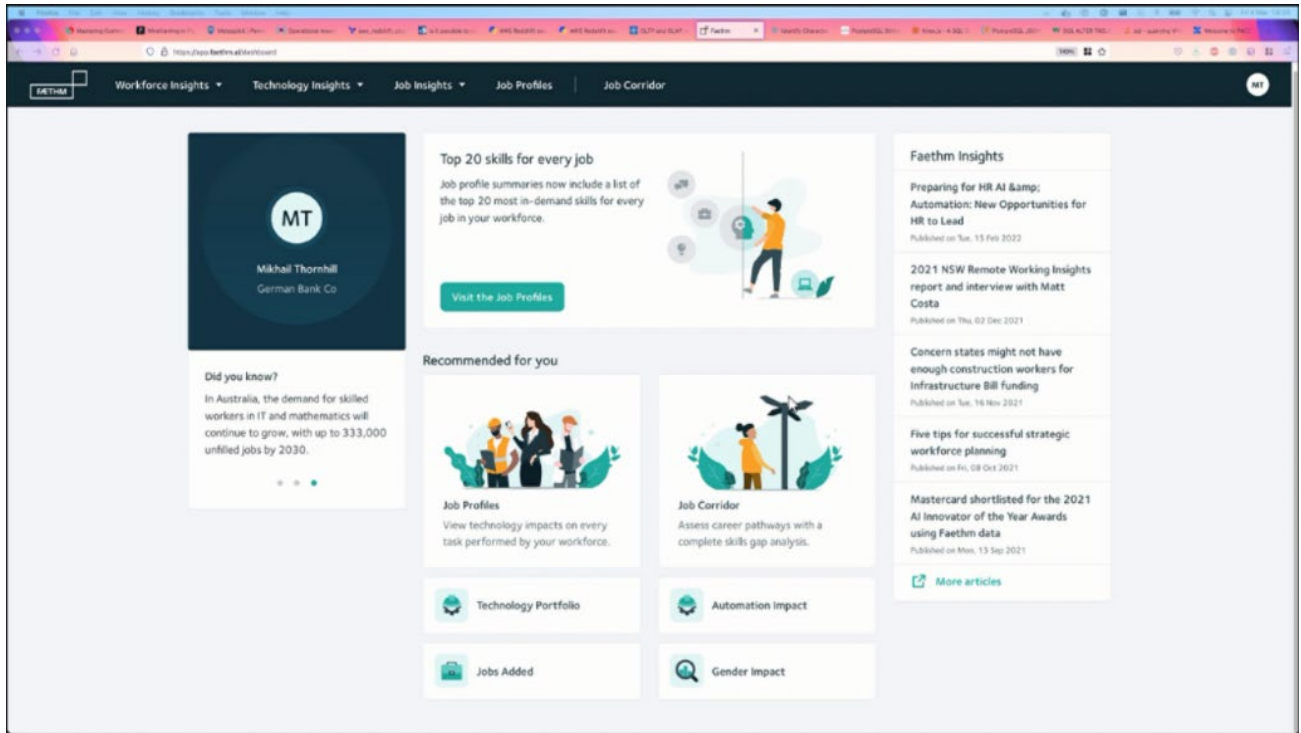
Figure 2 Screenshot of the current landing page (dashboard)

Project Requirements

The basic functional requirements that Faethm require us to fulfil is to provide a landing page where they will be prompted with a survey upon login in for the first time. The FTU experience must capture a user's name, occupation (from Faethm's list of occupations, company name and several other potential fields of interest, and trigger the completion of a survey that will ask about the intended use of the platform. To improve the FTU experience, the data that is obtained from the survey will need to be utilised to personalise the clients landing page. Faethm would also like access to any results obtained from these surveys or databases that we use so they can see the results of their onboarding questions. We will need to build several views in a SPA framework (React), a web backend API (SQLite or MongoDB), and suitable prototype infrastructure to run your workload locally, and data pipeline process captured user preferences to provide a personalised experience. Any UI that we use must follow the styling in the given Figma document and we should use the Faethm website, and the Faethm platform for reference. We are required to upload all work we do into a private GitHub repository to document all the work done and for Faethm to provide feedback.

Benefits

Tangible Benefits

Cost Savings

Currently, Faethm manually assigns a persona to each new user. In earlier iterations of the app, the process to assign a persona was an extensive task where one would have to lookup LinkedIn profiles for each user and assign a persona based on meta-data displayed in that profile. One of the main goals of the project is to automate that specific task such that there is no further necessity for an actual staff to administer a persona to users. This ultimately saves the business a lot of staff time and a bit of revenue which can be invested somewhere else.

Time Savings

Clients expect a streamlined and frictionless experience while navigating through the web app. Right now, when user's login into the Faethm app, they are guided to a less intuitive experience of a simple dashboard where the options or services presented do not specifically cater their needs. Thus, one of the key requirements of the project is to change that whole experience such that it leaves a lasting impression. Firstly, the users are asked to complete a survey based on which we assign them a persona. This process basically categorises the customer into manageable groups through which we can provide a more customised dashboard that aligns them with whatever plans they have on achieving with Faethm. So when the user logs in, in the future, they are supplied with everything they need right on their front page without any unnecessary clutter.

New Products and Services

In order to assign the personas, the clients are required to complete a survey. The data collected enables the business to have an even better customer insight which can be used in the future to polish the level of customization for current and potential new customers. Additionally, this insight can allow Faethm to offer new products and services catered to their user's needs.

Intangible Benefits

A personalised dashboard provides the client with a tailored FTU experience and a better understanding of the services of the business. This can likely act as a catalyst for customer retention and satisfaction. As mentioned above, satisfied customers in time become loyal customers. They believe in the brand becoming advocates and form a core revenue stream. The credibility and reputation gained from a core customer base can also minimise marketing expenses as their viva voce can operate as a crucial tool for acquiring new customers.

The data collected through the survey can assist the business to update the current perception of their target audience. Depending on the interests and demographics of the user base, further predictions can be made to deliver a more coherent service.

Alternative Solutions

As discussed, our group's primary goal is to categorise users into one of nine user profiles and then gather enough information about the user so that the Faethm application can propose the most relevant information for the user. During the multiple meetings with our group and the Faethm team we have brainstormed strategies that could be employed to achieve this goal and have derived a range of solutions that are strong alternatives to the recommended solution. These alternatives all have their own strengths and weaknesses which will be addressed in this section.

LinkedIn API integration

Application Programming Interface (API) allows developers to create applications that can communicate with each other. With this strategy we would take advantage of the existing API tools of LinkedIn and integrate this with Faethm. When users sign up, they would be prompted to provide their LinkedIn profile which would allow the use of the API to extract data from their LinkedIn profile and use this to create a new Faethm user profile. Using this data, Faethm would then be able to provide the most relevant resources available to each user and create a more tailored experience.

Advantages

- Using API integration reduces time needed for users to set up their profile as the data is extracted directly from the user's LinkedIn profile.
- Completely automated.
- Potential for more accurately created user profiles as it removes certain biases when filling out online forms.

Disadvantages

- This strategy relies on every user having an up to date, active LinkedIn profile with relevant information.
- Many users may not be comfortable with sharing their LinkedIn profiles.
- May be costly to hire developers to set up and maintain this tool.
- Unforeseen bugs and errors when importing data.

Zoom Interview

This solution is based on providing each new user a one-on-one consultation session with a Faethm team member upon signing up who will interview them. The user would answer questions and be able to provide the information and feedback they need for the Faethm member to categorise the user properly, as well as providing them with any helpful information.

Advantages

- Personal interaction which can help boost customer satisfaction, build relationships and increase customer retention.
- The user is able to ask questions and get instant responses, feedback and discuss concerns
- The Faethm team member would be able to get a fuller understanding of the user and create a profile that is more accurate.

Disadvantages

- Costly to employ and train staff to perform the interviews.
- Many users might find this invasive and unnecessary, which might dissuade them from signing up.

No Action

This option would involve scrapping the process of categorising users into specific profiles or gathering any information to provide specific solutions for the user. Instead, the user would simply sign up and then browse through the resources available on the site without being recommended content based on their profile.

Advantages

- Easy sign-up process without the hassle of filling out extra forms or other processes that gather user information.
- Less invasive for those who wish to keep their information private.
- Users are given unbiased access to the information and are able to choose for themselves which resources suit them the best.
- There is no setup so it requires no extra effort from programmers/developers.

Disadvantages

- The number of resources and content may be overwhelming and users may struggle to navigate through the information.
- Without the user profiles, Faethm has less opportunities to understand its user base and adapt to them.

Recommended Solution

The main objective of this project is to personalise the landing page of faethm.ai for Faethm users as mentioned in section 5.

Our recommended solution is to implement some additional data-driven steps to enhance the onboarding process for the users. For data-driven steps, we will use a questionnaire. This questionnaire is broken down into two parts:

1. Questions for user personas: current or new users should be able to answer a set of questions and based on their answers, they will be categorised into a certain persona. Each persona can have a different goal on the platform and based on the persona we can customise the landing page for the user.
2. Questions for platform products and usability: furthermore, the questioner can contain questions that can determine which function or product the user is most looking after on the Faethm platform and again based on the answers, we can personalise the landing page even more.

Comparison

LinkedIn API

In the questionnaire we can tailor the questions based on the needs of the stakeholder and the project requirements. In contrast, LinkedIn API will give us limited data on the user which cannot be tailored to all the requirements.

LinkedIn API might be able to determine the user persona, but personalised paged based on Faethm products and usability requires data which cannot be obtained from the API. To conclude, LinkedIn API can only solve part of the problem and we need customised questions to meet all requirements.

Zoom Session

This approach is the most resource intensive option as it requires staff available to brief all new users on the site. Conducting interviews is generally more time consuming than filling out a simple questionnaire and requires more staff. The interviewers need to be trained on conducting interviews which requires a large ongoing budget for training and hiring interviewers which makes this a costly and lengthy process when compared to the questionnaire option which is a one-time upfront cost.

No Action

While no action seems tempting, having a personalised page will help the business identify the target audience. This can help provide better service to the user (UX, UI). Understanding user's needs will help in predicting what they need and help the business to better prepare for the future products. Not having the questionnaire will steal this opportunity from the business. Giving the available servers Faethm, a tailored and unique landing page for users is what makes the site stand out and using the questionnaire can help us achieve that.

Conclusion

In conclusion, based on the comparisons, we can see that the most appropriate approach is the questionnaire as it gives flexibility to the stakeholder to tailor the questions based on their needs and other benefits mentioned above.

Assumptions

This feasibility report has been developed on the basis of certain assumptions:

- Access to the existing CSS styles to ensure a consistent UI with the rest of the app.
- While Faethm has the flexibility to accept a number of tech stacks, they ultimately prefer MERN (MongoDB, Express, React, Node). This report assumes that MERN will be used.
- The solution will be provided as a stand-alone single-page application (SPA) separate from the existing application.
- A laptop use case for most users has been assumed with mobile-friendliness, while ideal if achieved, as an added benefit.
- Access will not be granted to Faethm's existing code base for security.
- Faethm will provide us with the assistance necessary to develop this solution.

References

Bastian, H., 2020. *The gift of productivity: 3 benefits of customer service team diligence - Zendesk*. [online] Zendesk. Available at: <https://www.zendesk.com/blog/gift-productivity-3-benefits-customer-service-team-diligence/> [Accessed 9 March 2022].

Birnbaum, B., 2019. *Great Expectations: What Businesses Need To Know About Customer Service in the On-Demand Economy*. [online] Forbes. Available at: <https://www.forbes.com/sites/bradbirnbaum/2019/07/10/great-expectations-what-businesses-need-to-know-about-customer-service-in-the-on-demand-economy> [Accessed 9 March 2022].

IBM Cloud Education., 2020. *What is an Application Program Interface (API).* [online] IBM Cloud Learn Hub. Available at: <https://www.mulesoft.com/resources/api/what-is-an-api> [Accessed 9 March 2022]

Kim, M., 2020. *The power of personalization in user experience*. [online] Medium. Available at: <https://uxdesign.cc/the-power-of-personalization-in-user-experience-f3719402bd2> [Accessed 9 March 2022].

Solis, B., 2017. *Impatience Is A Virtue: How The On-Demand Economy Is Making Mobile Consumers Impatient*. [online] Forbes. Available at: <https://www.forbes.com/sites/briansolis/2017/11/20/impatience-is-a-virtue-how-the-on-demand-economy-is-making-mobile-consumers-impatient> [Accessed 9 March 2022].