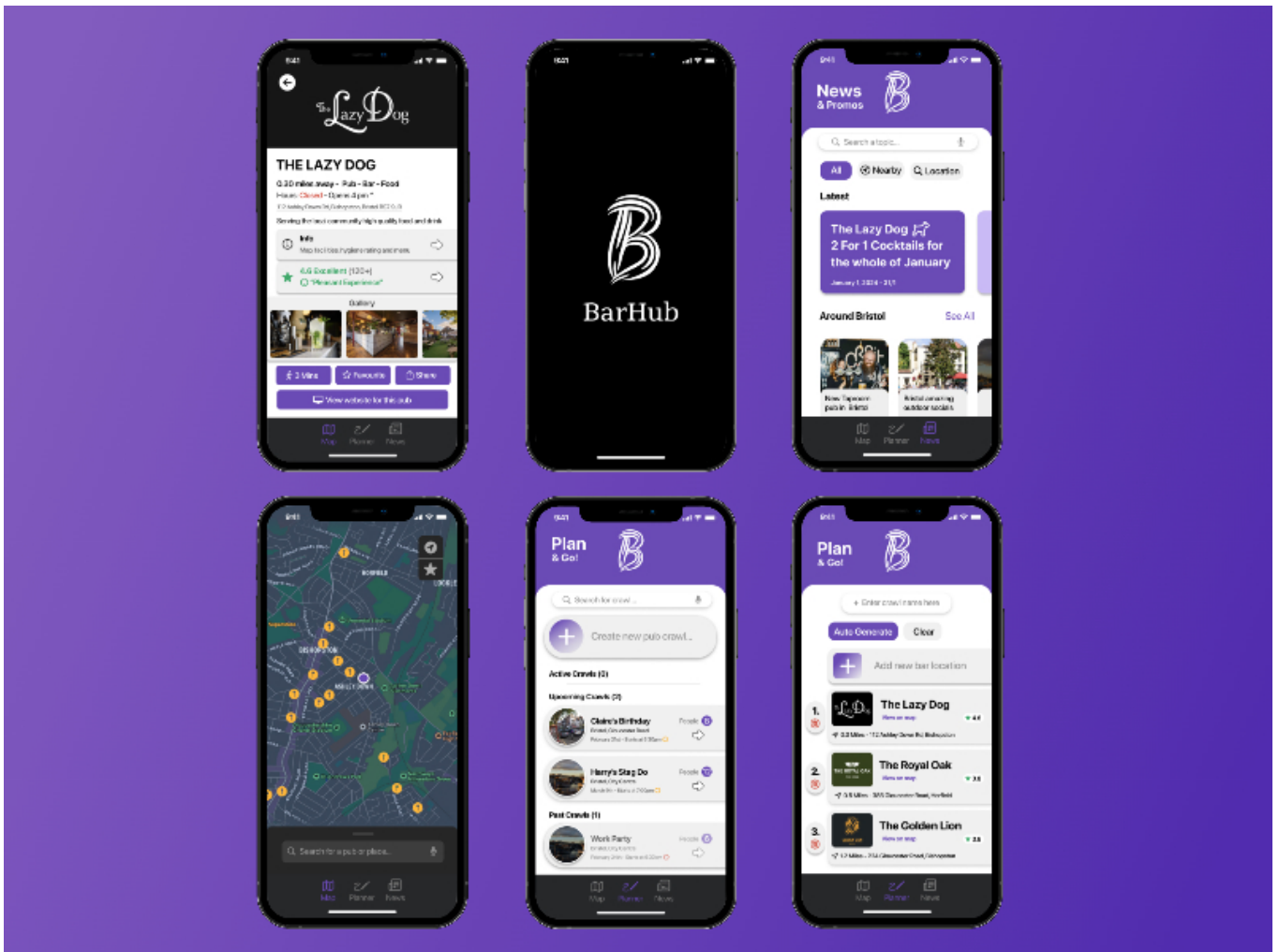


Comprehensive Creative Technologies Project: How a mobile application can support both local businesses and user preferences through an intuitive design

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Abstract

The BarHub mobile application project aims to support local pubs and bars by providing a user-centric platform that connects customers with these establishments through detailed recommendations, unique user interface, and seamless pub crawl planning. The project explores how mobile technology can be used to create a positive impact on the hospitality industry by addressing the challenges faced by local businesses in the competitive market. The application will be developed for iOS using Xcode and SwiftUI, and in this paper, research and various processes undertaken to bring this project to life can be found. It contains information about the current state of the UK pub and bar industry, the importance of user-centred design and iterative development, the creation of wireframes and high-fidelity prototypes using Figma, the integration of unique features such as personalised recommendations and pub crawl planning, the development of a brand identity, user testing and feedback, technical challenges and problem-solving strategies, and the potential for wider impact and commercial viability. The project demonstrates the potential for mobile applications to support local businesses while providing users with a valuable and engaging experience, offering insights into user experience design, hospitality technology, and the role of mobile apps in driving positive change in the industry.

Keywords: Mobile app development, Xcode/SwiftUI, User-Centric design, User-Interface, User-Experience

How to access the project:

Final Figma Prototype, including wireframes:

<https://www.figma.com/file/Jaat8BrIW72ak8nunh0i6N/Boozer-Prototype?type=design&node-id=0%3A1&mode=design&t=Z5VHFT3cGVgJRKIL-1>

The prototype and wireframe pages can be found in the left tab bar.

GitHub Repository of BarHubApp: <https://github.com/jamestheadgold/BarHubApp>

Link to YouTube Video: https://youtu.be/H8zkl_vVewI

1. Introduction

User experience (UX) design is a crucial discipline that focuses on enhancing the overall satisfaction and interaction of users with a product or system. At the heart of UX design lies the goal of creating intuitive, efficient, and user-centric interfaces that address the needs and preferences of the target audience (Hartson & Pyla, 2018). This project explores how a mobile interface can effectively support local businesses, specifically pubs and bars, and user preferences within this domain.

The primary objective of this project is to provide users with a seamless and personalised platform to explore local pubs and bars, addressing the common issue where people tend to repeatedly visit the same familiar establishments. By offering an intuitive interface, the project aims to encourage users to venture out and discover new entertainment experiences that cater to their individual preferences (Sineath, 2018). Concurrently, the project seeks to empower local pubs and bars, particularly smaller businesses, by providing them with a platform to promote their unique features and reach a broader customer base. This is particularly valuable as it helps to level the marketing playing field against larger competitors, enabling local establishments to showcase their offerings and stand out in the current landscape (O'Connor, 2023).

The project also focuses on creating a digital solution for the popular UK "pub crawl" convention, allowing users to easily plan, navigate, and share their pub crawl experiences through the mobile interface. This feature not only enhances the user experience but also provides additional exposure and foot traffic for local pubs and bars participating in the crawl.

The following key deliverables will be presented alongside the report:

- Figma Prototype
- Mobile app Build
- App Showcase

The project's objectives are:

- To Create a professional and recognisable brand design for a mobile application.
- To develop a prototype that involves the key areas and aspects of UX and UI
- To convert a prototype into a functioning app artefact

By addressing these objectives, the project seeks to develop a mobile interface that effectively supports local pubs and bars and caters to user preferences, ultimately enhancing the overall experience for users and providing growth

opportunities for local establishments (Todorovic, 2011; Florido, 2022).

2. Research questions

With the project introduction providing the necessary context, the research phase aims to address the following key questions:

Who is the target audience? Identifying the primary user groups and their characteristics is essential for developing a user-centric solution.

What are the user's primary needs? Understanding the target users' pain points, preferences, and expectations will inform the design and feature prioritisation.

Who are the main competitors? Analysing the strengths, weaknesses, opportunities, and threats (SWOT) of existing solutions in the market can uncover potential areas for differentiation.

What are the key features offered by competitors? Evaluating the features and functionalities of rival apps will help determine what aspects to emulate, improve upon, or uniquely offer.

What features can make the app more inclusive to a diverse user base? Ensuring the design and features cater to users with diverse backgrounds, accessibility needs, and preferences will enhance the app's inclusivity and reach.

What are the critical touchpoints in the user journey? Mapping out the key interactions and experiences users will have with the app can inform the design of seamless and intuitive workflows.

Who can benefit from this app? Identifying the primary beneficiaries, whether they are users, local businesses, or the wider community, will help align the project's objectives and value proposition.

By addressing these research questions, the project can develop a mobile interface that effectively supports local pubs and bars, caters to user preferences, and creates a compelling value proposition for all stakeholders involved.

3. Literature review

3.1 User experience design

The field of user experience (UX) design has evolved significantly in recent years, with a growing body of research and professional practices that provide valuable insights for the current project. A critical analysis of the relevant

literature reveals several key themes and considerations.

At the core of UX design lies the fundamental principle of user-centricity, where the focus is on addressing the needs, preferences, and pain points of the target audience (Hartson & Pyla, 2018; Norman, 2013). Researchers such as Garrett (2010) and Morville (2004) have developed comprehensive frameworks for understanding the various elements that contribute to a successful user experience, including information architecture, interaction design, and visual design. These elements work in tandem to create intuitive, efficient, and engaging digital interfaces.

Closely aligned with user-centricity is the concept of usability, which has been extensively explored in the literature. Usability experts like Nielsen (2012) and Krug (2014) emphasize the importance of designing interfaces that are easy to navigate, use, and understand, with a strong emphasis on reducing cognitive load and minimising user errors. Accessibility is another critical aspect of usability, as highlighted by the Web Content Accessibility Guidelines (WCAG) and works by authors such as Theofanos and Redish (2003), who stress the need for inclusive design practices.

In the context of mobile UX, researchers have identified unique challenges and best practices. Budiu and Nielsen (2013) have extensively studied the impact of small screen sizes, touch-based interactions, and limited attention spans on the design of mobile interfaces. Their research underscores the importance of clear information hierarchies, intuitive navigation, and optimised content presentation for mobile users. Similarly, Hooper and Berkman (2011) have provided valuable insights into the principles of thumb-friendly design and one-handed usability.

Alongside these technical considerations, the literature also emphasizes the significance of emotional and experiential factors in UX design. Researchers such as Norman (2004) and Hassenzahl (2010) have explored the role of aesthetics, emotions, and hedonic qualities in shaping user perceptions and engagement. These insights are particularly relevant for the current project, as they can inform the design of a visually appealing and enjoyable mobile interface.

Furthermore, the literature highlights the importance of iterative design processes and user testing. Agile methodologies, as described by Hartson and Pyla (2018), enable designers to gather feedback, identify pain points, and refine the product through multiple cycles of prototyping and evaluation. This approach aligns with the

project's objectives of creating a user-centric and iteratively improved mobile interface.

By synthesising these diverse perspectives from the UX design literature, the current project can draw upon a robust foundation to develop a mobile interface that effectively addresses user needs, embraces accessibility, and delivers a compelling and enjoyable user experience.

3.2 Mobile interface development

The development of effective mobile interfaces has been a subject of extensive research and professional practice, providing valuable insights for the current project. A critical analysis of the relevant literature reveals several key considerations and best practices in this domain.

One of the fundamental aspects of mobile interface design is the need to address the unique constraints and opportunities presented by small-screen devices. Budiu and Nielsen (2013) have conducted extensive research on mobile usability, highlighting the importance of clear information hierarchies, succinct content, and intuitive navigation to enable efficient interactions on mobile platforms. Their work emphasises the challenges posed by limited-screen real estate and the need for design solutions that are optimised for thumb-driven interactions.

Complementing the work of Budiu and Nielsen, Hooper and Berkman (2011) have explored the principles of "one-handed" usability, providing guidelines for designing interfaces that can be easily operated with a single thumb. This is particularly relevant for the current project, as it aims to create a mobile app that caters to the needs of users on the go, often with limited hand dexterity.

In addition to addressing the physical constraints of mobile devices, the literature also highlights the importance of addressing the cognitive and behavioural aspects of mobile users. Patel and Jasani (2010) have examined the impact of reduced attention spans and increased distractions on mobile interactions, advocating for design approaches that minimize cognitive load and facilitate quick decision-making. Similarly, Oinas-Kukkonen and Harjumaa (2009) have proposed the Persuasive Systems Design (PSD) model, which outlines design principles for creating mobile apps that can effectively motivate and engage users.

The literature also emphasises the significance of responsive and adaptive design in the mobile context. Works by Marcotte (2011) and Fling (2009) have explored the principles of responsive web design, which enable seamless user experiences across a wide range of device sizes

and orientations. This approach is particularly relevant for the current project, as it aims to create a mobile interface that can adapt to the diverse needs and preferences of its users.

Furthermore, the literature underscores the importance of incorporating user feedback and iterative design processes in the development of mobile interfaces. Researchers such as Hartson and Pyla (2018) have advocated for Agile methodologies, which facilitate rapid prototyping, user testing, and continuous refinement of the product. This approach aligns with the project's objective of creating a user-centric mobile interface that is informed by ongoing user feedback and evaluation.

By synthesising these insights from the mobile interface development literature, the current project can draw upon a robust foundation to create a mobile app that effectively addresses the unique challenges and opportunities presented by the small-screen environment, while prioritising user needs, cognitive load, and responsive design principles.

3.3 challenges faced by local businesses in the hospitality and nightlife industry

The challenges faced by local businesses, particularly pubs and bars, within the hospitality and nightlife industry, have been the subject of extensive research and professional analysis. A critical review of the relevant literature reveals several key insights that are crucial for the current project.

One of the primary challenges identified in the literature is the intensely competitive nature of the hospitality industry, particularly for smaller, local establishments. Studies by the British Beer and Pub Association (2022) and the Local Data Company (2021) have highlighted the significant pressures faced by local pubs and bars from larger national chains and franchise operations. These larger competitors often have access to greater resources, marketing budgets, and brand recognition, making it difficult for smaller businesses to compete effectively.

Researchers have also explored the impact of external factors, such as changing consumer trends and the COVID-19 pandemic, on the viability of local pubs and bars. Thrassou et al. (2018) and Malhotra and Hinings (2010) examined the need for local businesses to adapt their strategies and leverage digital platforms to reach and engage with their target audience. This is particularly relevant for the current project, as it aims to provide a mobile interface that can empower local establishments and help them compete in an increasingly challenging market.

The literature also emphasizes the importance of branding and marketing for local pubs and bars. Researchers such as Charlebois et al. (2016) and Brakus et al. (2009) have investigated the role of brand identity, customer experience, and emotional engagement in driving customer loyalty and market differentiation. These insights can inform the design of a mobile interface that effectively promotes the unique features and characteristics of local establishments, helping them stand out in a crowded industry.

Furthermore, the literature explores the cultural significance of the "pub crawl" phenomenon, particularly within the UK context. Works by Hayward and Hobbs (2007) and Tutenges (2015) have examined the social and experiential aspects of pub crawling, providing valuable insights into the motivations, behaviours, and expectations of users engaged in this activity. Understanding these nuances can inform the design of features within the mobile interface that cater to the specific needs and preferences of pub crawl enthusiasts.

By critically analysing the literature on the challenges faced by local businesses in the hospitality and nightlife industry, the current project can develop a more comprehensive understanding of the obstacles and opportunities that these establishments face. This knowledge can inform the design of a mobile interface that effectively addresses the pain points of local pubs and bars, empowering them to compete more effectively and reach a broader customer base.

4. Research methods and Ethics

To address the research questions outlined for this project, a mixed-methods approach was employed, incorporating both qualitative and quantitative research techniques. This strategy was adopted to gather comprehensive insights from the target audience, understand the competitive landscape, and inform the design and development of the mobile interface.

A thorough competitive analysis was conducted to understand the current landscape of mobile applications serving the nightlife and pub discovery market. This analysis focused on two prominent apps in the space: Google Maps and the Pub Finder app available on the App Store. The SWOT (Strengths, Weaknesses, Opportunities, Threats) framework was utilized to systematically assess the competitive offerings and identify areas where the current project could differentiate itself (Humphrey, 1960).

The SWOT analysis revealed that Google Maps, while a powerful and widely used navigation tool, lacked a specific focus on the pub and nightlife

niche (see Appendix F). Its strengths included its extensive location database, user-generated reviews, and seamless integration with other Google services. However, its weaknesses lay in the absence of features tailored to pub crawls and the limited ability to discover unique, local establishments.

On the other hand, the Pub Finder app demonstrated a clear focus on the pub and nightlife market, with features such as curated pub listings, user-generated ratings, and social sharing capabilities. However, its weaknesses included a limited user base, inconsistent data quality, and a lack of advanced search and filtering options.

The SWOT analysis helped identify opportunities for the current project to differentiate itself by combining the strengths of both competitors while addressing their weaknesses (see Appendix F). This included developing a mobile interface with a strong emphasis on local pubs and bars, incorporating personalized recommendations, and offering a seamless pub crawl planning experience.

An online survey was distributed to a sample of 30 potential users. The survey collected quantitative data on user demographics, preferences, and attitudes towards existing mobile apps in the market. This included questions about the users' frequency of pub and bar visits, important factors in choosing establishments, satisfaction with past pub crawl experiences, and their primary needs and expectations from a mobile app for discovering local pubs and bars.

The survey data was analysed using statistical methods to identify trends, correlations, and the relative importance of different features and user requirements (see Appendix G). This allowed for a comprehensive understanding of the target audience and their needs, which could then be incorporated into the design and development of the mobile interface.

The survey for this project was designed and conducted with strict adherence to ethical guidelines to ensure the protection and well-being of all participants (see Appendix G). Informed consent was required, and all survey participants were provided with a clear explanation of the purpose of the study and the voluntary nature of their participation. They were informed of their right to withdraw from the survey at any time without consequence. Confidentiality and data protection of the survey responses were collected and stored in an anonymised manner, with no personally identifiable information retained.

5. Practice

The research phase provided a solid foundation of insights and user needs, to move forward into the practical implementation of the mobile interface. This section highlights the pivotal moments and choices that moulded the application's development, demonstrating technical proficiency, problem-solving skills, and a commitment to user-centric design concepts. The development stages involve a range of activities, including the prototype development process, the creation of a cohesive brand identity, the technical implementation challenges, and the measures taken to ensure accessibility and inclusivity. Furthermore, the section will highlight user testing and feedback, as well as problem-solving strategies used to address various conceptual, and practical obstacles that arose throughout the project.

5.1 Prototype development

At the heart of the mobile interface development process was the creation of a high-fidelity interactive prototype, which served as the tangible embodiment of the project's vision. This iterative prototyping phase was crucial in translating the research insights and user needs into a functional, user-centric solution.

The research findings and the researcher's prior knowledge laid the groundwork for the prototype development, which began with the creation of wireframes (Figure 1). These wireframes established the fundamental structure and layout of the mobile application's user interface, directly informed by the priority guide and critical flow chart developed during the research phase (Garrett, 2010; Hartson & Pyla, 2018).

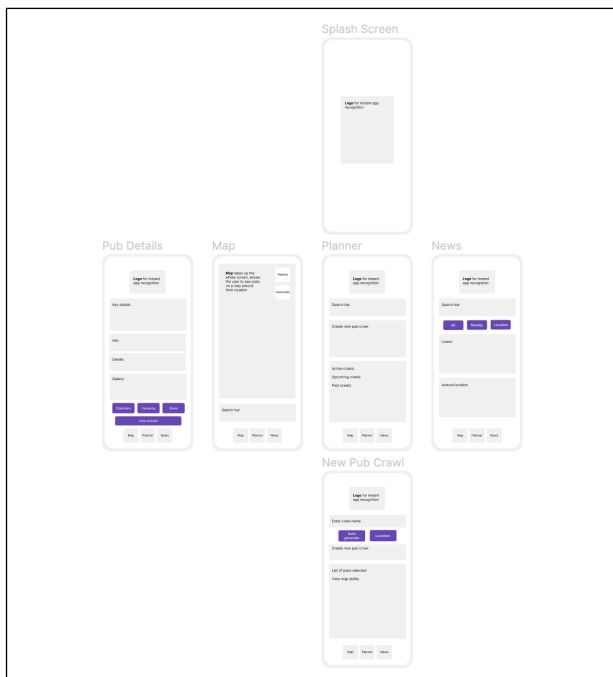


Fig 1: BarHub app Wireframes

The priority guide, which identified the key features and functionalities that were most important to the target users, provided a clear roadmap for the wireframe design (Figure 2). By aligning the wireframes with these prioritised user needs, ensured that the core aspects of the app's user experience were positioned at the forefront of the design.

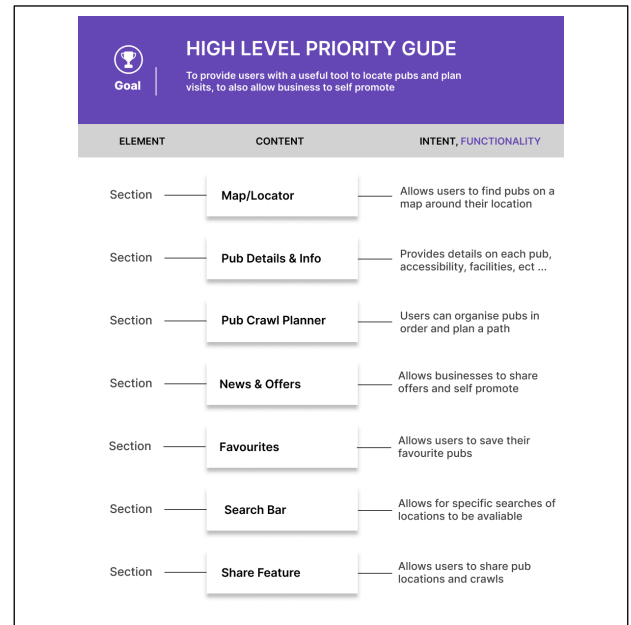


Fig 2: Priority Guide

Complementing the priority guides, the critical flow chart helped map out the essential user journeys and interactions within the mobile interface (Figure 3). These diagrams, which visually depicted the users' intentions and expectations, served as a valuable reference point during the wireframing process (Sineath, 2018).

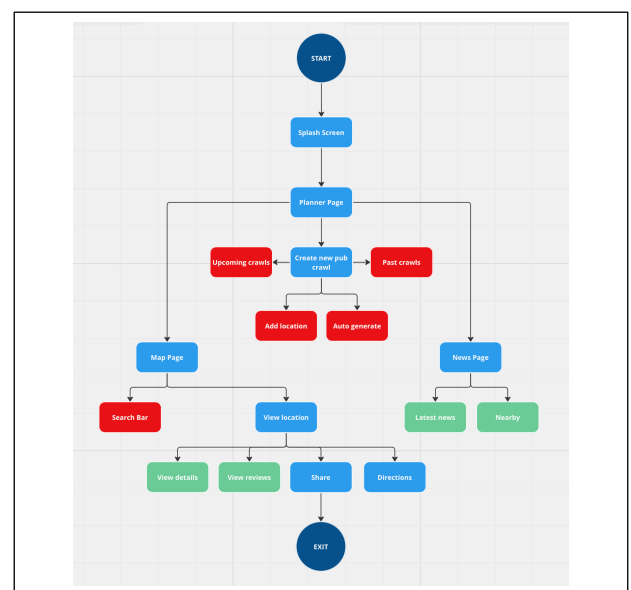


Fig 3: Critical Flow Chart

The wireframing process began with rough templates, allowing for the exploration of various layout options, navigation flows, and information architectures. These initial wireframes were then refined and elevated to mid-fidelity prototypes, incorporating more detailed UI elements and interactive components.

After several rounds of revisions and refinement, the wireframes were turned into a high-fidelity Figma prototype. This prototype leveraged Figma's powerful prototyping capabilities, enabling the creation of seamless interactions, animations, and transitions that closely mimicked the intended user experience (Budi & Nielsen, 2013).

The Figma prototype was an invaluable tool in the development process. The use of iOS templates and SF symbols in Figma provided a realistic and convincing design to the prototype that was suitable for user testing and later allowed refine the app's functionality, ensuring that every interaction and feature was optimized for the target users (See Appendix C).

Through this iterative approach to prototype development, a solid foundation was able to be established for the mobile interface, one that was firmly grounded in the research insights and user priorities. The combination of wireframing, mid-fidelity prototyping, and the creation of a high-fidelity Figma prototype was a critical factor in the successful delivery of a user-centric and technically robust application.

5.2 Brand identity and design

In developing the brand identity for the mobile application there was careful consideration of the logo design, colour palette, typography, and overall visual language. The goal was to create a cohesive and memorable brand that aligned with the project's objectives and resonated with the target audience's preferences, as revealed through the research phase.

The app logo was skilfully designed using Adobe Illustrator, featuring a stylised letter "B" as the primary element, which serves as a shorthand for the app's name, BarHub. The logo design is unique, simple, and easily scalable, ensuring clear visibility across various contexts and sizes. The flexibility of the logo allows for the colours to be interchangeable, adapting to different settings and backgrounds while maintaining its distinctive identity (Figure 4).

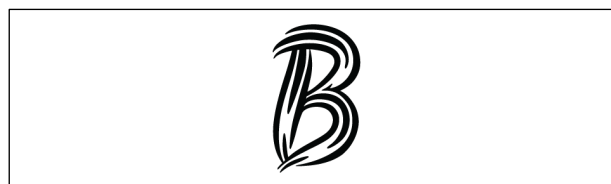


Fig 4: BarHub App Logo

The colour palette for the BarHub app was thoughtfully selected, with purple (694AB5) as the primary colour, grey (F0F0F0) as the secondary colour, and white and black as accent colours (Figure 5). The choice of purple as the dominant colour evokes a sense of sophistication, creativity, and exclusivity (Labrecque & Milne, 2012), aligning with the app's focus on curating unique and memorable experiences. The grey secondary colour provides a neutral backdrop that enhances the overall design's versatility and adaptability, while the white and black accents offer contrast and visual hierarchy.

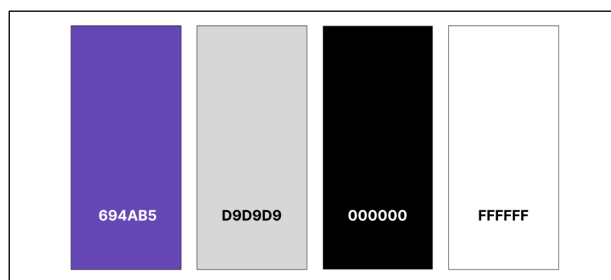


Fig 5: BarHub Colour palette

To complement the logo and colour scheme, the "Suravaram" typeface was selected for the app name text. This stylistic choice adds a touch of elegance and sophistication to the brand identity, reinforcing the app's promise of delivering a more refined and curated pub discovery experience. The use of a distinctive typeface helps differentiate BarHub from its competitors and establishes a strong brand personality (Shaikh, Chaparro, & Fox, 2006).

Throughout the app interface, the SF Pro Display typeface was chosen to maintain consistency with the iOS design language. This decision ensures a seamless and familiar user experience for the app's target audience, who are likely to be accustomed to the visual style of iOS applications. The use of SF symbols further enhances the app's cohesion with the iOS ecosystem, providing a sense of native integration and intuitive interaction (Apple, 2021).

During the development process, the mobile application was initially named "Boozer." However, after receiving feedback from potential users and considering the app's primary focus, the decision was made to change the name to "BarHub." The term "Boozer," while historically

used to refer to pubs or bars, was deemed outdated and potentially unappealing to the target audience. In contrast, "BarHub" more accurately reflects the app's core functionality and purpose, which is to serve as a central hub for discovering, exploring, and engaging with local pubs and bars. This name change demonstrates the project's commitment to user-centred design and responsiveness to feedback, ensuring that the app resonates with its intended users and effectively communicates its value proposition.

To ensure a seamless feel across the application the brand identity and style remained consistent throughout the design process to guarantee a unified style. This process includes aspects such as the app's visual elements, including logo usage, colour specifications, typography rules, and interface design principles. By following these values, a cohesive and recognisable brand experience was maintained throughout the mobile interface and could be used to support future materials, such as marketing collateral and user onboarding screens.

The thoughtful development of BarHub's brand identity, encompassing the logo design, colour palette, typography, and overall visual language, demonstrates the commitment to creating a distinctive and memorable brand that aligns with the project's objectives and resonates with the target audience. By leveraging insights from the research phase and utilising the established design principles, a strong and cohesive brand identity was created that effectively communicates the app's value proposition and enhances its market appeal.

5.3 Technical implementation

5.3.1 Xcode and SwiftUI

The technical implementation phase of the BarHub app involved utilizing Xcode, Apple's integrated development environment (IDE), and the SwiftUI framework to transform the Figma prototype into a fully functional mobile application. Xcode, being the official IDE for iOS app development, provides a comprehensive set of tools and frameworks designed for building apps that adhere to Apple's design guidelines and performance standards (Apple, 2021). SwiftUI, a declarative framework introduced by Apple, enables developers to build user interfaces using an intuitive and expressive syntax, allowing for a seamless connection between the design and development phases (Apple, 2021). By leveraging Xcode and SwiftUI, the BarHub app was designed to have a native look and feel, seamlessly integrating with the iOS ecosystem and following the human interface guidelines set forth by Apple.

5.3.2 Map functionality

One of the significant challenges encountered during the technical implementation was the integration of location-based services and the display of pub markers on the map. Implementing the map functionality required a deep understanding of MapKit, Apple's framework for embedding maps and handling map-related interactions (Apple, 2021). The researcher had to familiarise themselves with working with map views, annotations, and user interactions to create a seamless and responsive map experience. The following code snippet demonstrates the `searchPubs()` function used to achieve this:

```
func searchPubs() {
    let request = MKLocalSearch.Request()
    request.naturalLanguageQuery = "pubs"
    request.region =
MKCoordinateRegion(center:
CLLocationCoordinate2D(latitude:
51.481230, longitude: -2.580748),
latitudinalMeters: 5000,
longitudinalMeters: 5000)
}
```

To accurately display the locations of nearby pubs, the app needed to perform a local search using the `MKLocalSearch.Request` class and retrieve relevant data from the MapKit framework. The `searchPubs()` function was used to achieve this, defining a search request with the query "pubs" and a specific geographic region. Implementing this search functionality required careful consideration of factors such as search query optimisation, region selection, and error handling to ensure accurate and reliable pub marker placement.

5.3.3 Development methodology

To address the technical challenges and ensure the successful delivery of the app artifact, an agile development methodology was adopted. By breaking down the implementation process into smaller, manageable iterations, the app was built incrementally, with tests on feature functionality. Regular code reviews and testing cycles allowed for the early identification and resolution of bugs and performance issues. The iterative nature of agile development also facilitated the incorporation of user feedback and design refinements throughout the implementation phase, enabling improvements to the app's usability and performance.

During the development process, certain pages, such as the login screen, were intentionally removed from the app. The decision to exclude a login feature was based on the goal of providing users with a seamless and hassle-free experience. By eliminating the need for users to create an account or remember login credentials, BarHub reduces friction and allows users to access the

app's features and benefits immediately upon installation. This approach aligns with the principle of user-centred design, prioritising simplicity and ease of use. While a login feature might offer some personalization benefits, the core functionality of BarHub, such as discovering local pubs, accessing venue information, and planning pub crawls, can be effectively delivered without requiring users to create an account. Moreover, removing the login requirement helps to protect user privacy and reduces the risk of sensitive information being compromised. By focusing on delivering value to users without the need for a login, BarHub streamlines the user experience and ensures that the app remains accessible and engaging for its target audience.

5.4 User testing and feedback

Several small-scale user testing sessions were conducted throughout the development process to ensure that the BarHub app effectively met the needs and expectations of its target users. These sessions focused on evaluating the app's main features and user flows, providing invaluable insights that informed iterative design improvements.

The user testing sessions were designed to be focused and efficient, typically involving a small group of representative users who fit the app's target demographic. By keeping the sessions small and targeted, detailed, qualitative feedback was gathered that could be quickly analysed and incorporated into the design process.

During each session, participants were given specific tasks to complete within the app, such as searching for a page or viewing a review. As users navigated the app and attempted to complete these tasks, their interactions and comments were carefully observed and noted, providing insight into areas where users encountered confusion, frustration, or delight.

5.5 Challenges and problem-solving

One of the primary challenges faced during the development process was the steep learning curve associated with Xcode, Apple's IDE for iOS app development. As a new user of Xcode, there was a significant knowledge gap to bridge, to effectively utilise the platform and its associated frameworks such as SwiftUI.

To address this challenge, a proactive learning approach was adopted, involving dedicating time to watching YouTube guides and tutorials specifically tailored to Xcode and SwiftUI. By immersing in these educational resources, a foundational understanding of the platform was gradually built, enabling the researcher to

navigate the development environment more confidently.

The use of online learning resources proved to be an effective problem-solving strategy, allowing for a self-paced acquisition of knowledge and skills. The visual nature of the YouTube guides, combined with step-by-step explanations, made complex concepts more accessible and easier to grasp. The ability to pause, rewind, and replay sections of the tutorials facilitated a deeper understanding of the material, allowing the researcher to solidify learning and apply the acquired knowledge to the project at hand.

Another challenge faced during the development of the BarHub app was creating the necessary icon configurations for various device resolutions and sizes (Figure 6). Generating multiple versions of the app icon to ensure optimal display across different iOS devices can be a time-consuming and tedious process. However, this challenge was effectively resolved by utilising the "Bakery" app.

Bakery is a powerful tool that simplifies the process of creating and managing app icons for iOS applications. By leveraging Bakery, the task of generating icon configurations was greatly streamlined. The app automatically generates all the required icon sizes and resolutions based on a single high-quality input image. This eliminates the need to manually create and export individual icons for each specific device resolution. It presented a reliable method to re-use in the future.

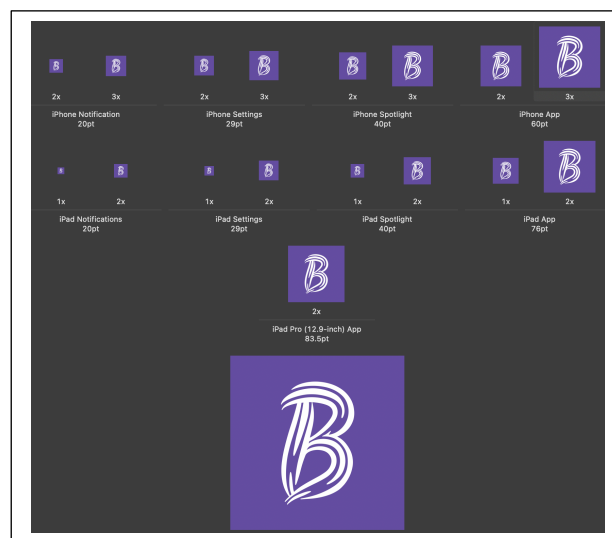


Fig 6: BarHub icon configurations

5.6 Project Management and Iteration

The successful implementation of the BarHub mobile app relied heavily on effective project management and an iterative development approach. By adopting Agile methodologies, the project was able to adapt to changing

requirements, incorporate user feedback, and overcome unforeseen challenges while maintaining momentum and delivering a high-quality product.

At the outset of the project, a comprehensive project plan was created, outlining key milestones and deliverables across the entire development lifecycle. This plan served as a roadmap, ensuring that all essential tasks were accounted for and that the project remained on track. The plan was divided into monthly segments, with each month focusing on specific aspects of the project, such as research, conceptual development, prototyping, branding, and app development.

To foster transparency and accountability, a weekly blog was maintained throughout the project. This blog provided a platform to document progress, set weekly goals, and reflect on achievements. By clearly defining "This week's tasks" and "What was achieved this week," the blog helped maintain focus and motivation. Additionally, the blog allowed for the identification of tasks that needed to be carried over to the following week, ensuring that no critical items were overlooked.

The project's success was largely due to the implementation of agile methodology. By dividing the development process into more manageable, smaller iterations, the method may be adjusted quickly to accommodate evolving needs and input from users.

User feedback played a crucial role in shaping the design and functionality of the BarHub app. Through user testing sessions, valuable insights were gathered, which informed iterative improvements to the mobile interface. For example, early user feedback revealed that the initial navigation structure was confusing and hindered task completion. In response, the navigation was redesigned, streamlining user flows, and improving overall usability. This iterative approach, with feedback loops, ensured that the final product is closely aligned with user needs and expectations.

Throughout the development process, the project plan and weekly blog served as essential tools to refer to consistently. By regularly reviewing the plan and updating the blog, it was possible to celebrate successes, identify areas for improvement, and make necessary adjustments to keep the project on track.

6. Discussion of outcomes

The successful completion of the BarHub mobile application has significant implications for both the local pub and bar industry and the field of user experience design in mobile applications. By

providing a user-centric platform that connects customers with local establishments, BarHub has the potential to revitalise the local pub and bar scene, particularly in the wake of the COVID-19 pandemic. The app's focus detailed design, and seamless pub crawl planning addresses key pain points and unmet needs in the market, as identified through the research phase (Thrassou et al., 2018; Malhotra and Hinings, 2010).

Moreover, the development of BarHub demonstrates the importance of user-centred design and iterative development in creating successful mobile applications. The project's emphasis on understanding user needs, preferences, and behaviours through research, prototyping, and testing aligns with best practices in the field of UX design (Hartson & Pyla, 2018; Norman, 2013). The iterative approach employed throughout the development process, incorporating user feedback, and adapting to changing requirements, serves as a model for other mobile app projects seeking to create engaging and effective user experiences.

6.2 Lessons learned and insights gained

The research and development process for the project yielded valuable lessons and insights that can inform future projects in the field of mobile app design and development. One of the key takeaways from this project was the critical importance of user-centred design and iterative development. By placing the user at the heart of the design process, gathering feedback, and refining the app based on user input, the final product was able to effectively meet the needs and expectations of its target audience.

The project highlighted the importance of effective project management in the development process. The use of agile methodologies and clear documentation helped to ensure that the project was aligned and remained on track despite challenges and shifting requirements. The maintenance of a weekly blog and the creation of a comprehensive project plan were particularly valuable in keeping on track and reaching small milestones.

The BarHub app project also demonstrated the value of drawing upon a diverse range of research methods and design techniques to inform the development process. The combination of competitive analysis, user surveys, persona development, wireframing, and prototyping allowed for a holistic understanding of the problem space and the creation of a solution that effectively addressed user needs (Budi & Nielsen, 2013; Garrett, 2010). This multifaceted approach to research and design serves as a model for other mobile app projects seeking to create innovative and user-centric solutions.

6.3 Critical analysis of the project outcomes

The BarHub mobile application project achieved several notable successes while also facing certain limitations. The project's establishment of a customer-focused design was one of its main achievements that effectively addressed the needs and preferences of the target audience. Through extensive research, prototyping, and testing, the app was able to provide a seamless and intuitive user experience that facilitated the discovery and exploration of local pubs and bars. The integration of a unique user-centred design, specific target focus, and pub planning techniques successfully differentiated BarHub from existing solutions in the market (Thrassou et al., 2018; Malhotra and Hinings, 2010).

However, the project also faced certain limitations, particularly in terms of the learning curve when applying the technical implementation. With a lack of understanding of Xcode and SwiftUI, a learning curve was encountered in effectively leveraging these tools to transform the Figma prototype into a fully functional mobile application. This challenge required significant time and effort to overcome, new skills and knowledge had to be quickly acquired to ensure the successful development of the BarHub app.

Another area for improvement identified during the project was the need for more extensive user testing and feedback throughout the development process. While user input was sought at key stages, a more continuous and systematic approach to user testing could have helped to identify and address usability issues earlier in the development cycle at the most basic stages, to allow the following stages of the project to be more accurate and thought through. This insight highlights the importance of integrating user feedback as an ongoing, iterative process rather than a discrete phase in the project timeline.

Despite these limitations, the BarHub project compares favourably to existing solutions and previous work in the field. The app's focus on local establishments linking towards providing users with easy access to details and information sets it apart from more generic location-based services like Google Maps (Brakus et al., 2009; Charlebois et al., 2016). Moreover, the project's emphasis on user-centred design and iterative development aligns with best practices in the field of mobile app development (Hartson & Pyla, 2018; Budiu & Nielsen, 2013), demonstrating the potential for BarHub to serve as a model for future projects in this space.

6.4 Addressing the research questions

The project was guided by several key research questions, which focused on understanding the needs and preferences of the target audience, identifying challenges faced by local pubs and bars, and exploring the potential for a mobile app to support these businesses and enhance the user experience. Through the research and development process, the project was able to effectively address these questions and provide valuable insights and solutions.

The initial research phase, which included a competitive analysis, user surveys, and persona development, provided a deep understanding of the target audience and their needs and preferences. This research revealed a clear demand for a mobile app that could facilitate the discovery and exploration of local pubs and bars, whilst providing detailed location information. The project's focus on user-centred design and the integration of these key features demonstrates the effectiveness of the chosen research methods in addressing the first research question.

The second research question, which focused on the challenges faced by local pubs and bars, was addressed through a combination of secondary research and user feedback. The literature review highlighted the impact of increased competition, changing consumer preferences, and the COVID-19 pandemic on the local pub and bar industry (Thrassou et al., 2018; Malhotra and Hinings, 2010). Online research and findings validated these challenges and provided insight into the potential for a mobile app to support these businesses through increased visibility, customer engagement, and promotional opportunities.

Finally, the project's successful development of the BarHub mobile application demonstrate the effectiveness of the chosen methods and processes in addressing the third research question. The combination of user-centred design, iterative development, and responsive project management allowed for the creation of a high-quality, user-centric app that effectively meets the needs of both users and local businesses. While there were certain limitations and areas for improvement, as discussed in the previous section, the overall success of the project validates the chosen approach and highlights the potential for mobile apps to support local businesses and enhance the user experience in the pub and bar industry.

6.5 Originality and innovation

The mobile application project demonstrates originality and innovation in several key areas. One of the most significant contributions of the project is the development of a user-centric approach to supporting local pubs and bars through a mobile app. By focusing on the specific

needs and preferences of the target audience, as well as the unique challenges faced by local businesses, BarHub offers a tailored solution that sets it apart from more generic location-based services (Brakus et al., 2009; Charlebois et al., 2016).

Another innovative aspect of the BarHub project is its integration of the UK pub crawl "tradition" and its planning capabilities. This focus not only enhances the user experience but also provides valuable opportunities for local businesses to engage with their customers and build brand loyalty (Thrassou et al., 2018; Malhotra and Hinings, 2010). By leveraging these innovative features, BarHub has the potential to create a new standard for mobile apps in the pub and bar industry. From the research taken into place, there is no app in the market with the same functionality that this app holds, with focusing on this specific area.

The project also demonstrates originality in its approach to design and development. The use of a comprehensive research phase, incorporating competitive analysis, user surveys, and persona development, allowed for a deep understanding of the problem space and the creation of a user-centric solution (Hartson & Pyla, 2018; Norman, 2013). The iterative development process, guided by methodologies and continuous user feedback, ensured that the final product effectively met the needs of both users and local businesses (Budiu & Nielsen, 2013).

6.6 Future directions and recommendations

The successful completion of the BarHub mobile application project opens several potential avenues for future research and development. One key opportunity is the expansion of the app's features and functionality based on user feedback and evolving market needs. This could include the integration of new social features, such as user messaging and event planning, as well as the incorporation of advanced data analytics to provide more personalised recommendations and insights for both users and local businesses (Thrassou et al., 2018; Malhotra and Hinings, 2010).

Another potential direction for future development is the expansion of BarHub into new geographic markets and user segments. By adapting the app's design and content to cater to different regional preferences and demographics, BarHub could become a scalable platform for supporting local pubs and bars on a national or even international level. This expansion could also open opportunities for partnerships and collaborations with other businesses and organisations in the hospitality and tourism sectors (Brakus et al., 2009; Charlebois et al., 2016).

Future research could also explore the impact of BarHub on the local pub and bar industry, as well as the broader implications for user behaviour and social interaction in these settings. By conducting longitudinal studies and user interviews, further research could gain valuable insights into how mobile apps like BarHub are shaping the way people discover, experience, and engage with local establishments (Thrassou et al., 2018; Malhotra and Hinings, 2010).

Based on the lessons learned and insights gained from the BarHub project, several recommendations can be made for future projects in the field of mobile app design and development. These include:

Prioritise user-centred design and iterative development processes to ensure that the final product effectively meets the needs of the target audience (Hartson & Pyla, 2018; Norman, 2013). Allocate sufficient time and resources for self-directed learning and problem-solving when faced with technical challenges or new development tools (Apple, 2021).

Develop a thorough project plan and project blog, in co-operation with agile methodologies and regular feedback to ensure alignment and adaptability throughout the project (Budiu & Nielsen, 2013).

Continuously seek out opportunities for innovation and differentiation, leveraging unique features and approaches to set the project apart from existing solutions in the market (Brakus et al., 2009; Charlebois et al., 2016).

By following these recommendations and building upon the successes and lessons learned from the BarHub project, future mobile app projects can create innovative, user-centric solutions that effectively address the needs of their target audiences and contribute to the advancement of the field.

7. Conclusion and recommendations

The research and practical work completed for the BarHub mobile application project provided valuable insights and conclusions that can inform future directions. The user-centred design approach, iterative development process, and incorporation of user feedback were pivotal in creating an app that effectively caters to the target audience's needs, validating the significance of these methodologies in mobile app development. The integration of unique features, such as the pub crawl planning capabilities, successfully differentiated BarHub from existing solutions, highlighting the importance of innovation in establishing a competitive edge. The

technical challenges faced, including learning Xcode and SwiftUI, emphasise the necessity of allocating sufficient time and resources for self-directed learning when adopting new development tools. The use of agile methodologies, a comprehensive project plan, and regular progress tracking were crucial in maintaining project alignment and adaptability, serving as best practices for future app development projects.

For students or professionals continuing this project, it is recommended to conduct further user testing with a larger, diverse sample to validate the app's usability and identify areas for improvement. Exploring the integration of additional social features and leveraging user data analytics could enhance user engagement and provide valuable insights for both users and local businesses. Expanding BarHub to new markets and user segments, while adapting the app's design and content to cater to different regional preferences and demographics, could open new partnership and collaboration opportunities.

The BarHub project has the potential for significant impact in the wider field by setting a new standard for mobile apps in the pub and bar industry, encouraging developers to prioritise user needs and niche functionality. The app's ability to support local businesses and enhance the user experience could make it an attractive case study for conferences, academic journals, or industry events focused on mobile app development, user experience design, or hospitality technology. The project's findings and methodologies could serve as a valuable learning resource for students and professionals in the field if shared via creative commons.

BarHub shows promising commercial potential as a monetizable platform, generating revenue through business listings, sponsored content, or premium features. Alternatively, the technology behind BarHub could be licensed or white-labelled to companies seeking to develop similar location-based, niche mobile apps.

In conclusion, the BarHub mobile application project successfully achieved its objectives and generated valuable insights and methodologies that can benefit the wider field of mobile app development. With its innovative features, user-centric approach, and potential for commercial and societal impact, BarHub is well-positioned to make a meaningful contribution to the way people discover and engage with local pubs and bars, potentially revolutionising the hospitality industry mobile app landscape.

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Appendix A: Project Log

Appendix B: Project Timeline

Appendix C: Project Assets

Appendix D: User Personas

Appendix E: User Journey Maps

Appendix F: SWOT Analysis

Appendix G: Survey Questions

Appendix H: Elevator Pitch

Appendix A: Project Log

Date	This Week's Task	What Was Achieved	Next Week/Carried Over	Notes
01-Oct-2023	Brainstorm Project Ideas, mind map/topics of interest + create weekly blog	Come up with some ideas around mobile apps and supporting local business	Look into UI and UX around mobile applications, how to be included + Studied	
08-Oct-2023	Research around UI and UX	Looked into key focus points and how to conduct project research	Have my project idea and write an initial proposal	(300) Words
15-Oct-2023	Write the Initial Proposal	Completed the initial proposal for my project + handed it in	Write the full proposal + set up a meeting with supervisor + hand In proposal	(2000) Words
22-Oct-2023	Write Full proposal + Hand in	Full proposal was written and handed in, had initial meeting with supervisor	Initial UX/UI research when producing a mobile app (What to look out for)	Due 26/10/2023
29-Oct-2023	Initial UI/UX research	Looked into key areas and highlighted important focus points in UI/UX	Conduct competitor analysis on similar apps and programs + SWOT analysis	
05-Nov-2023	Competitor Analysis + SWOT	Analysis on Google Maps + SWOT also on other apps	Highlight focus groups of different users. Create User Personas	
12-Nov-2023	Focus Groups	Clarified the user target audience and focus group for the app	Develop initial brand ideas, logo/theme/colours/text/name ext..	
19-Nov-2023	Concept Brand Ideas	Developed brand logo and name, started on the theme	Clarify what the main app features and functions will be	
26-Nov-2023	Clarify app features	The main features of the app were highlighted and explained	Develop 3 separate user personas based off user research conducted	
03-Dec-2023	User Personas	Created 3 separate personas based off different user types	Develop a user journey map of a customer using the mobile app	
10-Dec-2023	User Journey Maps	Create 3 separate user journey maps based off the user personas	Create a priority guide on the app features to the clarify importance for users	
17-Dec-2023	Priority guide	Developed a priority guide of app features, to use later in development	Start drafting wireframes of each page of the mobile app	

17-Dec-2023	Priority guide	Developed a priority guide of app features, to use later in development	Start drafting wireframes of each page of the mobile app	
24-Dec-2023	App wireframes	Created app wireframes for each page of the app to be used for prototype	Create critical flow charts hand in hand with wireframes to explore flow possibility	
31-Dec-2023	Critical flow chart & complete wireframes	Created critical flow chart alongside wireframes, I was able to test out the user flow to optimise efficiency	Create Figma Prototype, using the wireframes as the bases	
07-Jan-2024	Figma prototype	Worked on figma prototype to be ready for poster presentation	Develop poster and write progress update, finish prototype in time for presentation	
14-Jan-2024	progress updates and poster submission	Wrote progress update & developed poster continued work on prototype	Prepare everything for poster session, make prototype interactive for viewing	Due 18/01/24
21-Jan-2024	Poster session	Poster session complete. Received feedback on work done so far	Take feedback into affect and re-look at areas on the prototype with notes from the session	Due W/C 22/01/24
28-Jan-2024	Figma rework	Took on feedback and made adjustments to the app prototype, such as removing the log in page and narrowing down the purpose of the app	Continue further development on the prototype, develop all pages ready for Xcode conversion	
04-Feb-2024	Complete Figma prototype	Completed the prototype from final feedback	Finalise app branding to be implemented into the app development and prototype	
11-Feb-2024	Finalise brand identification	Finalised branding such as app name, logo, colour scheme and fonts	Download all required development programs and spend time learning the programs	
18-Feb-2024	Xcode/swift learning	Dowloaded programs required (Xcode) & watched some Linkdin tutorials on development	From the learning start to begin development of the main app, trying the accurately recreate the prototype	
25-Feb-2024	Begin App development starting with splash screen	Started the app development, created a splash screen from scratch including animation	Start development into main sections of the app & draft up a plan for report	

04-Mar-2024	Development on main app pages & set out sections for written report	Started development into the main pages of the app starting with the planning page. Created a draft for the report	Further develop the app trying to have a solid bases of all main features	
11-Mar-2024	Further app development	Continued with development of app, main pages coming together	Add details within each page, make pages look flush and tidy	
18-Mar-2024	Continue app development	Completed all major sections of the app, ready for user testing		
25-Mar-2024	App testing	Conducted final app testing to review feedback for any final improvements	Create app mock ups, find examples, find out how and what works well	
01-Apr-2024	App mock-ups	Created app mock ups using adobe templates for showcasing	Conduct final improvements from user testing, develop app builds	
08-Apr-2024	Final improvements & app builds	Final improvements from feedback and made builds of the app	Compile Video.mp4 of mobile app, finish report	

15-Apr-2024	Compile Video.mp4 & finish report	Created video using after affects showcasing app, finished report in time for hand in	Package deliverables ready for submission	
22-Apr-2024	Final Hand In	Handed in deliverables before the deadline		Due 25/04/2024
13-May-2024	Vivas take place			Due W/C 13/05/2024

Appendix B: Project Timeline





Month	Task	Days
October	Brainstorm project Ideas	2
	Research UX and UI	2
	Write Initial Proposal	1
	Write Full Proposal	2
	Submit Full Proposal (26/10/23)	N/A
November	Research competitors	2
	Research documentation	2
	Compile research data	4
	Concept brand ideas	1
	Clarify app features and functions	2
December	User personas	2
	User journey map	2
	Priority guide	1
	Lo-fi prototype	2
	Logo & branding ideation	2
	Critical flow chart	3
January	Begin Figma prototype	2
	App intent frames	2
	Final logo design	1
	Complete Figma prototype	2
	Poster & Progress Update Submission (18/01/23)	N/A
	Poster Presentation (23/01/23)	N/A
	Begin app development	3
February	App development feedback	3
	App feedback + documentation	6
	Begin Brand manual	2
March	Start creation of project report	2
	Continue app development	3
	Finish Brand manual	3
	Final app testing	4
April	Finalise project report	3
	Final feedback from supervisor	1
	Final improvements and alterations	4
	Script for explainer video	2
	Explainer video	1
	Package deliverables	1
	Report Submission hand-in (25/04/24)	N/A

Appendix C: Project Assets

All graphics, icons symbols, and other graphical elements used come from the the resources linked below.

1. SF Symbols: <https://developer.apple.com/sf-symbols/>
2. The Lazy Dog Images: <https://thelazydogbristol.com>
3. Golden Lion Icon: https://www.facebook.com/goldenlionbristol/?locale=en_GB
4. The Royale Oak Icon: <https://theroyaloakmilborne.co.uk/the-royal-oak-logo/>

Appendix D: User Personas

<p>Harry Reed</p> <p>21, Business Student</p> <p> Bristol</p> 	<p>ABOUT</p> <p>Harry Reed is a 21-year-old business student currently attending Bristol UWE. With a passion for entrepreneurship and a keen interest in the business world, he juggles his academic responsibilities with a desire to explore the vibrant social scene that Bristol has to offer. Harry is outgoing, sociable, and always up for a good time with friends.</p> <p>NEEDS</p> <ul style="list-style-type: none"> • Efficiency in Planning • User Friendly Interface • Simple Navigation • Customisation <p>FRUSTRATIONS</p> <ul style="list-style-type: none"> • Lack of details • Difficulty in Navigation • Limited Options 	<p>CHARACTERISTICS</p> <p>Trait 1: Social</p> <p>Trait 2: Adevnturous</p> <p>Trait 3: Organised</p> <p>TECHNOLOGY</p> <p>Apps <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Internet <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/></p> <p>Social media <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>KEY WORDS</p> <p>Student Values Outgoing</p> <p>21 Years Old Sociable</p>
<p>Emma Jones</p> <p>24, Post Graduate</p> <p> Leicester</p> 	<p>ABOUT</p> <p>Emma Jones is a 24-year-old postgraduate student from Leicester, making a special trip to Bristol to celebrate her friend's birthday. While she appreciates the academic environment, she's also excited about the opportunity to explore Bristol's nightlife and social scene during this short visit. Emma is friendly, open-minded, and eager to make the most of her time in the city.</p> <p>NEEDS</p> <ul style="list-style-type: none"> • Local Insights • Simple Planning • Efficient navigation • Communication <p>FRUSTRATIONS</p> <ul style="list-style-type: none"> • Limited Local Knowledge • Lack of personalisation • Wasted Time 	<p>CHARACTERISTICS</p> <p>Trait 1: Social Explorer</p> <p>Trait 2: Adaptable</p> <p>Trait 3: Enthusiastic</p> <p>TECHNOLOGY</p> <p>Apps <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Internet <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Social media <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>KEY WORDS</p> <p>Post-Grad Eager Social</p> <p>24 Years Old Open-minded</p>

Matthew Perry

31, Tech Professional

 Bristol



ABOUT

Matthew Perry is a 31-year-old tech professional working in a prominent tech company in Bristol. Known for his meticulous planning skills and tech-savvy nature, Matthew has taken on the role of lead organiser for his friend's upcoming stag do. His job demands attention to detail, and he brings that same level of precision to his personal life. Matthew enjoys the tech scene in Bristol and is always on the lookout for innovative solutions to enhance his experiences.

NEEDS

- Efficient Planning
- Variety of options
- Tech Intergration
- Updated Information

FRUSTRATIONS

- Lack of details
- Technical issues
- Unintuitive design

CHARACTERISTICS

Trait 1: Leader

Trait 2: Tech-Savvy

Trait 3: Enthusiastic

TECHNOLOGY

Apps

Internet

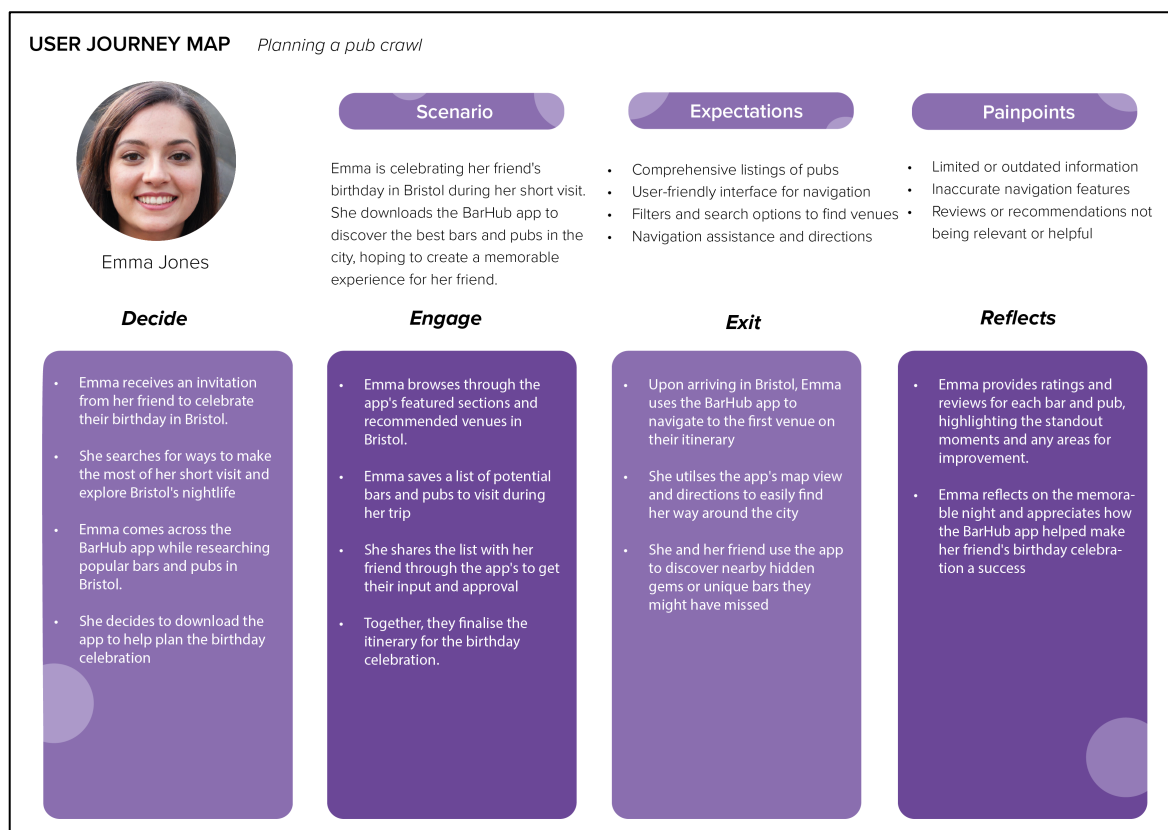
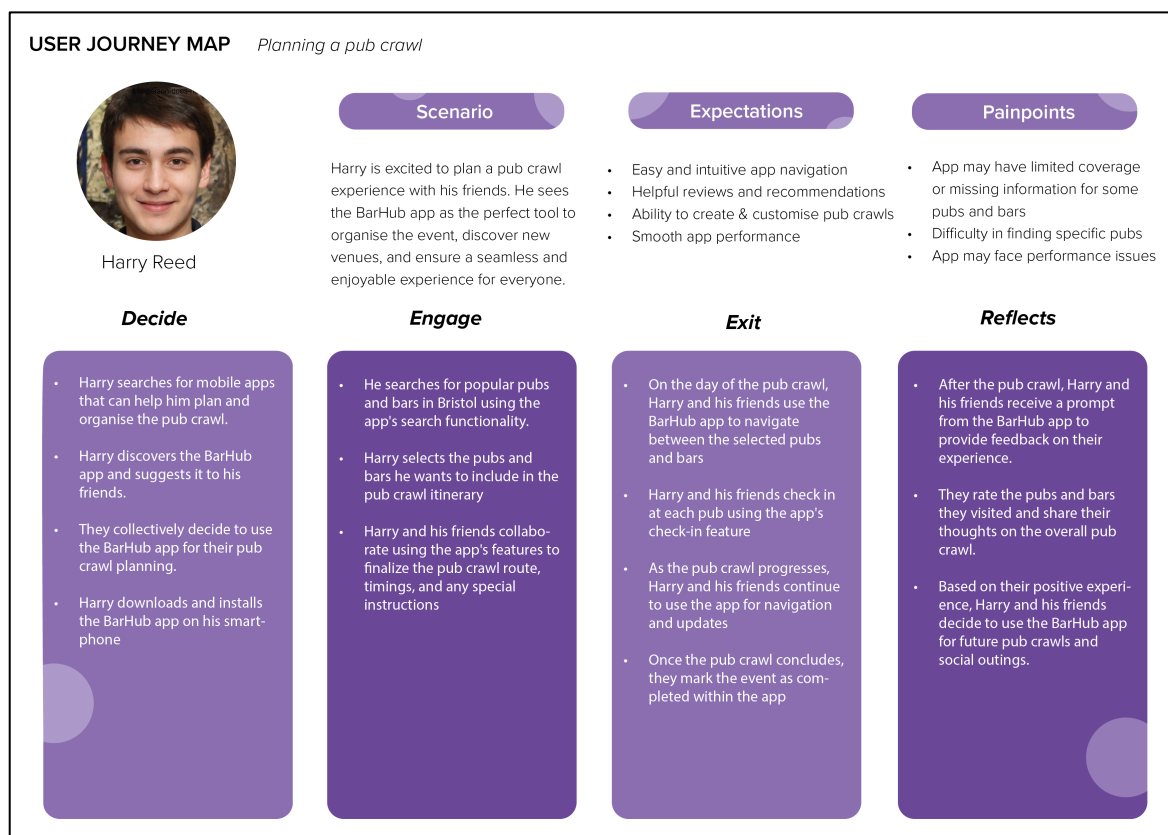
Social media

KEY WORDS


Professional Stag do Organiser

31 Years Old Tech-savvy

Appendix E: User Journey Maps



USER JOURNEY MAP *Planning a pub crawl*



Matthew Perry

Scenario

Matthew, is tasked with planning his friend's stag. He turns to the BarHub app to find the venues and create a seamless itinerary, leveraging its features to streamline the process and ensure a great overall experience.

Expectations

- Search and filtering options
- Detailed venue information
- Customisable itinerary creation
- Feedback and rating system for venues

Painpoints

- Incomplete or inaccurate venue information hampering the planning process
- Privacy concerns regarding live tracking and location sharing

Decide

- Matthew is tasked with organising his friend's stag do in Bristol.
- As a tech-savvy individual, he naturally turns to his smartphone to find a suitable app to assist in the planning process.
- He comes across the BarHub app while searching for pub crawl planning tools

Engage

- He utilises the app's search filters to find pubs and bars that align with the group's interests and preferences.
- Matthew creates a custom itinerary within the app, meticulously selecting the order of venues and the duration of each stop.
- Matthew finalises the itinerary based on the group's feedback and makes any necessary adjustments
- Matthew leverages the app's map feature to plan his route between each location

Exit

- On the day of the stag do, Matthew assumes the role of the group leader, guiding the participants through the planned itinerary.
- He uses the BarHub app's real-time navigation to ensure the group stays on schedule and doesn't miss any planned stops.
- At each venue, Matthew encourages the group to check in using the app to follow their progress

Reflects

- After the successful completion of the stag do, Matthew takes a moment to reflect on the experience.
- He provides detailed feedback on each venue visited, rating them based on various criteria such as atmosphere, service, and overall experience.
- He leaves a comprehensive review of the app on the app store, emphasizing how it streamlined the planning process and enhanced the overall experience.

Appendix F: SWOT Analysis

Google Maps:

SWOT Analysis

Strengths

- **Global Coverage:** Extensive worldwide mapping data with detailed directions across countries and regions
- **A User-Friendly Interface:** Intuitive, easy-to-use interface for navigation and accessing information
- **Real-Time Traffic:** Provides updated, real-time traffic information to optimise routes
- **Integration:** Seamless integration with other Google services enhances the overall experience, such as Google Search and Google Assistant
- **Continuous Improvements:** Regular updates with new features and data for relevance and reliability

Weaknesses

- **Dependency on the Internet:** Requires stable Internet connectivity, limiting reliability in areas with poor access
- **Data Accuracy:** Occasional errors or outdated mapping data lead to user frustration
- **Battery Drain:** Significant battery power consumed, especially with prolonged GPS and data usage
- **Interface:** Selecting specific location categories is confusing and too broad

Opportunities

- **Emerging Technologies:** Integrate with innovations like augmented reality to advance navigation capabilities
- **Partnerships:** Collaborate with local data sources, transit services and governments to enrich data
- **Service Expansion:** Diversify offerings beyond navigation to recommendations, travel planning etc.

Threats

- **Competition:** Potential loss of users to alternative mapping/navigation apps
- **Privacy Concerns:** Increased data privacy regulations pose compliance challenges
- **Technology Shifts:** Changes like autonomous vehicles could disrupt navigation services' role
- **Government Regulations:** Adhering to regional rules and restrictions poses obstacles globally

Pub Finder App

SWOT Analysis

Strengths

- Conveniently locates nearby pubs based on user's location
- Provides promotions and happy hour information
- Includes pub menus, photos and reviews
- Easy pub booking/reservation through the app
- Works offline via cached maps and listings

Weaknesses

- Requires a large database of pub information that needs regular updating
- Safety issues if used irresponsibly for excessive drinking
- Low barrier to entry, easy for competitors to replicate
- Potential lack of listings in smaller towns/areas
- Relies on bars/pubs to accurately list details

Opportunities

- Integration with ride-hailing apps (uber) for safe transportation
- Partnerships with pub chains/breweries for sponsorship and advertising
- Enhanced AR features to view pub ambience before visiting
- Gamification through pub quizzes or creating "to-do" pub lists
- Expansion to bars, lounges and nightlife spaces beyond pubs

Threats

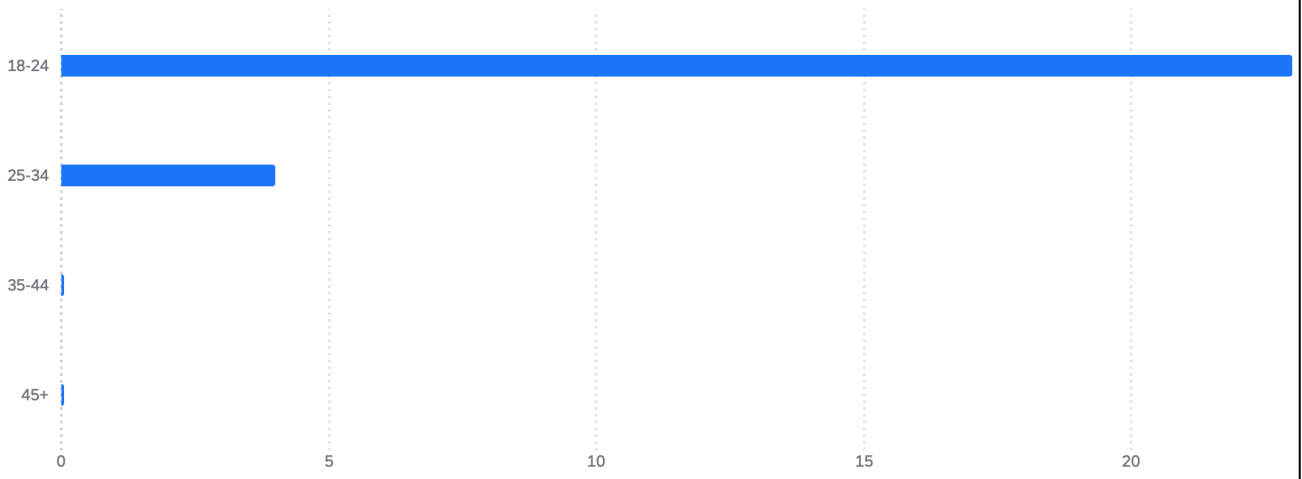
- Low switching costs mean users can easily shift to copycat apps
- Changes in alcohol laws or zoning regulations affect listings
- Users' concerns over privacy of location and usage data
- Possibility of bars/restaurants building custom listing apps
- The emergence of new or niche nightlife recommendation apps

Appendix G: Survey Questions

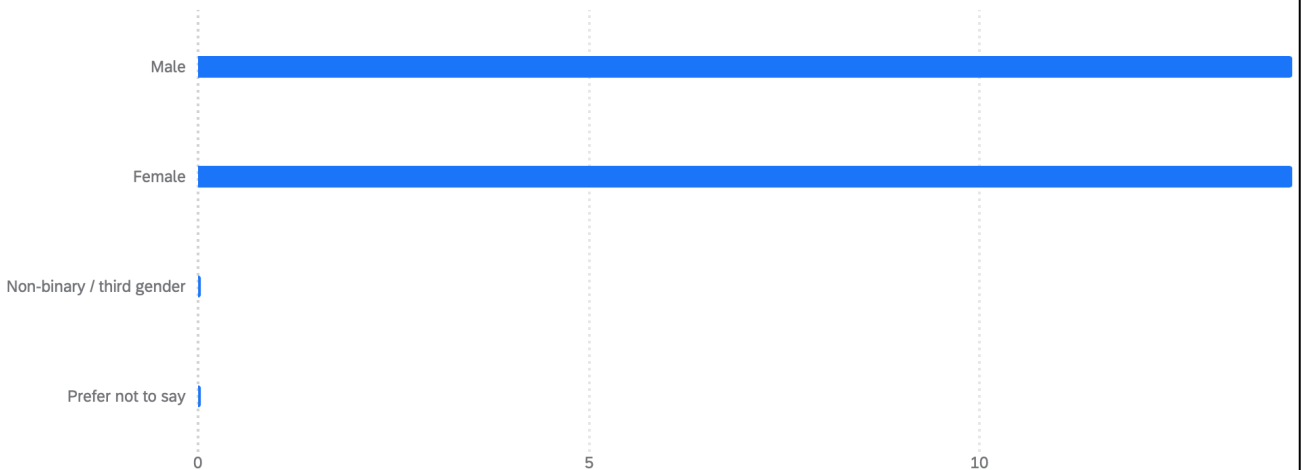
- Thank you for taking the time to complete this survey. Your responses will provide valuable insights that will inform the development of a mobile application designed to support local pubs and bars, as well as enhance the overall nightlife experience for users. The purpose of this survey is to gather information about your preferences, behaviours, and pain points when it comes to discovering and experiencing local pubs and bars. Your participation in this survey is completely voluntary and anonymous. All responses will be kept confidential and used solely for the purposes of this project. The survey should take approximately 5 minutes to complete. If you have any questions regarding the survey, contact: [\[Contact Info\]](#)
I agree to participate in the research. ***REQUIRED***

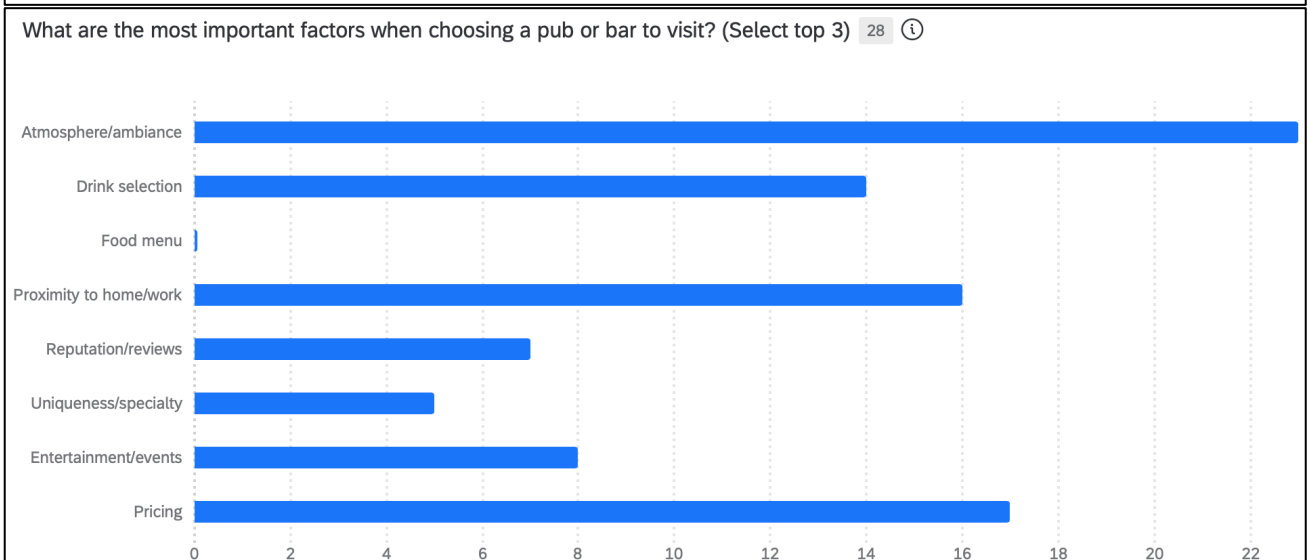
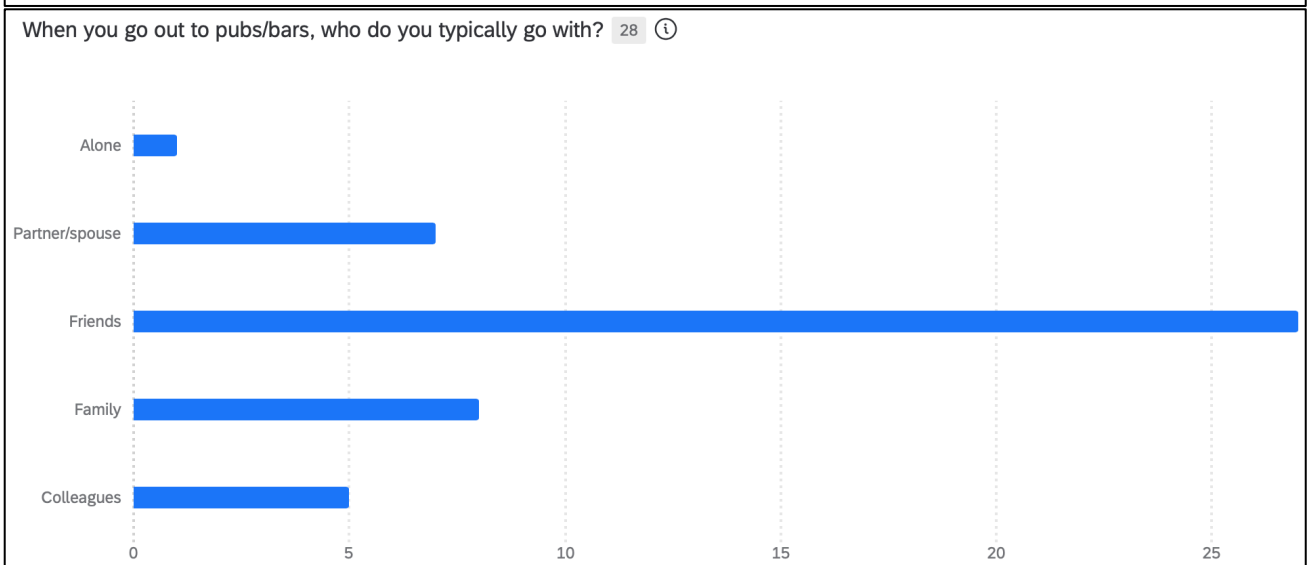
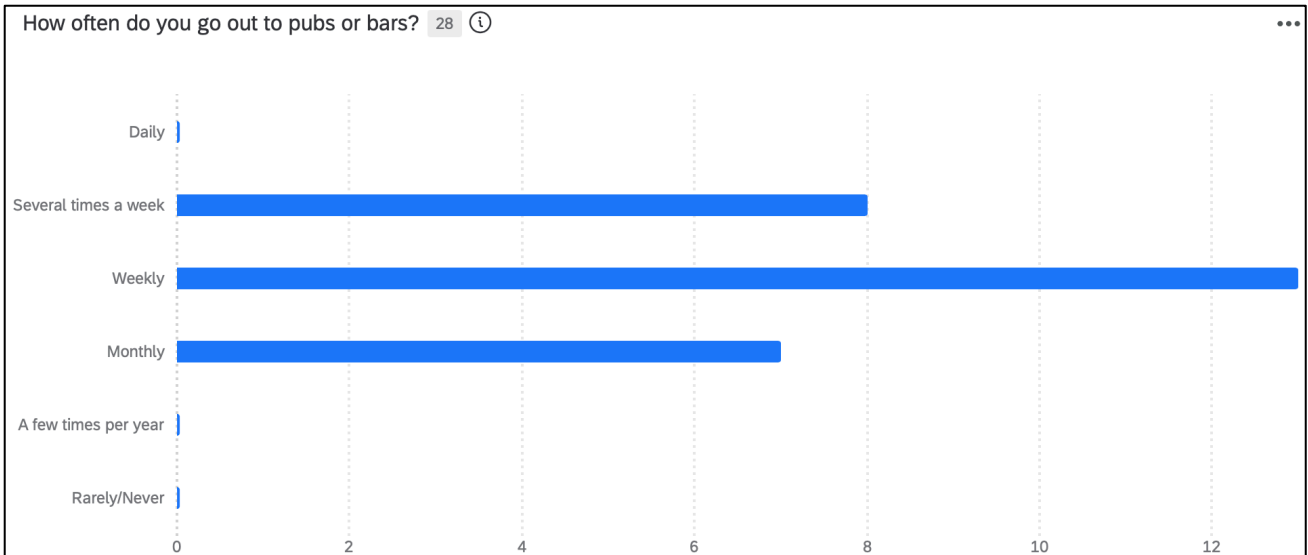
	Percentage	Count
Yes	100%	31
No	0%	0

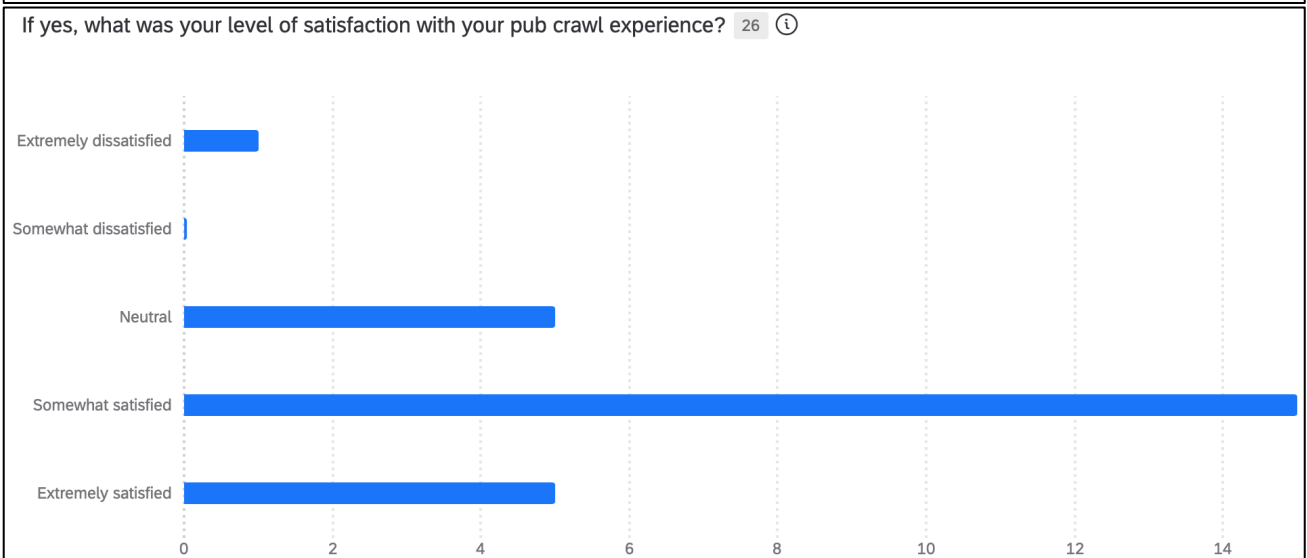
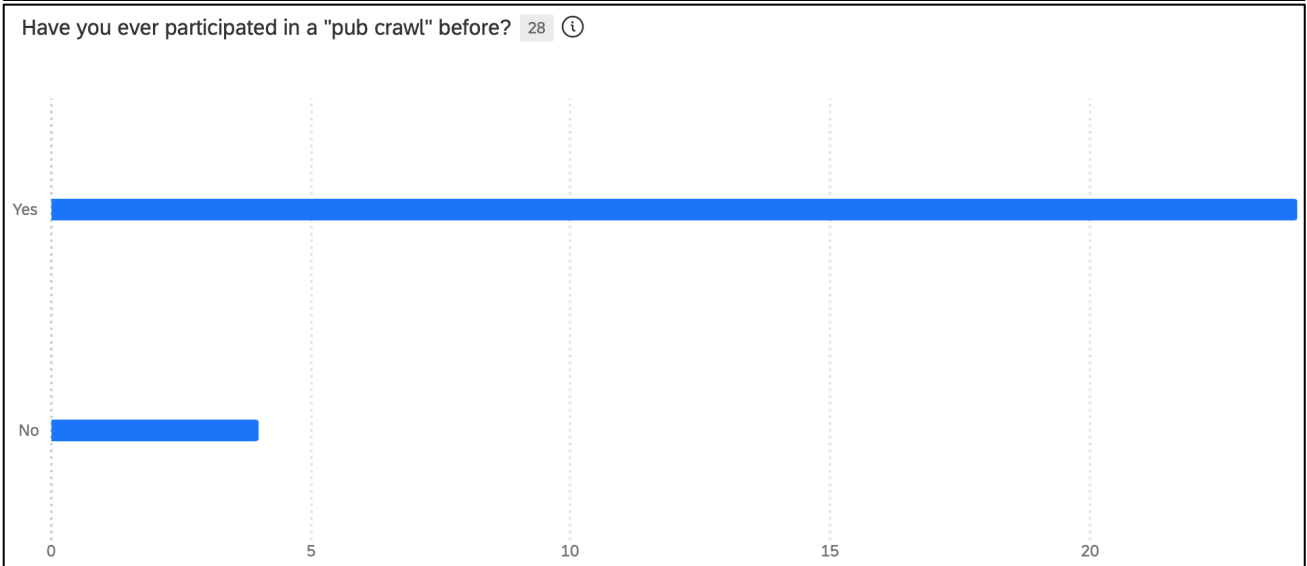
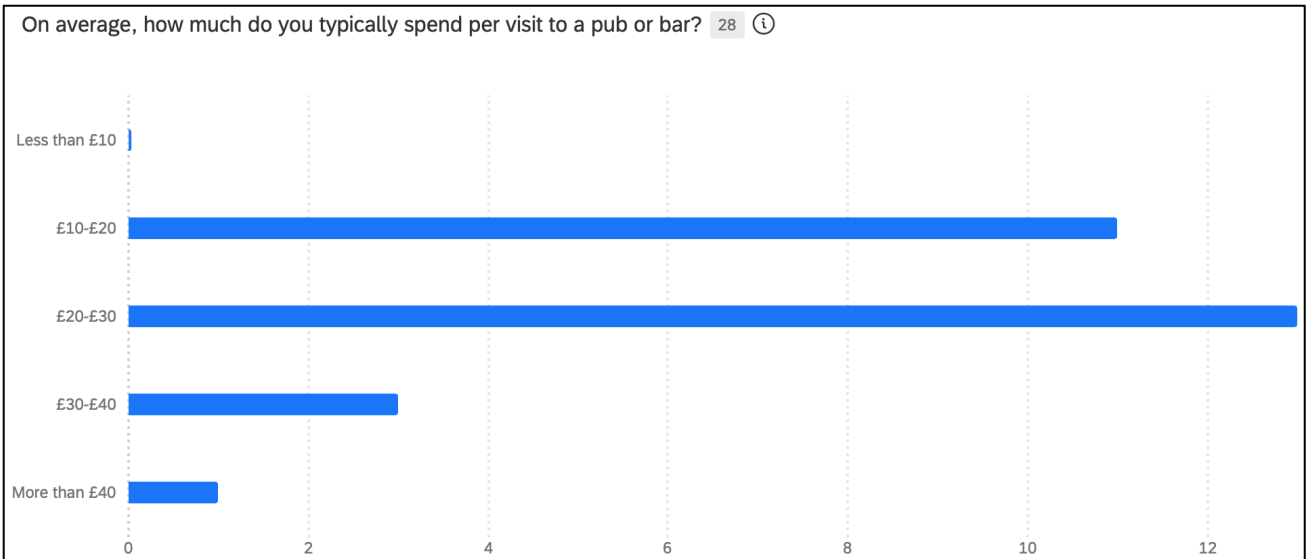
What is your age? 27 ⓘ

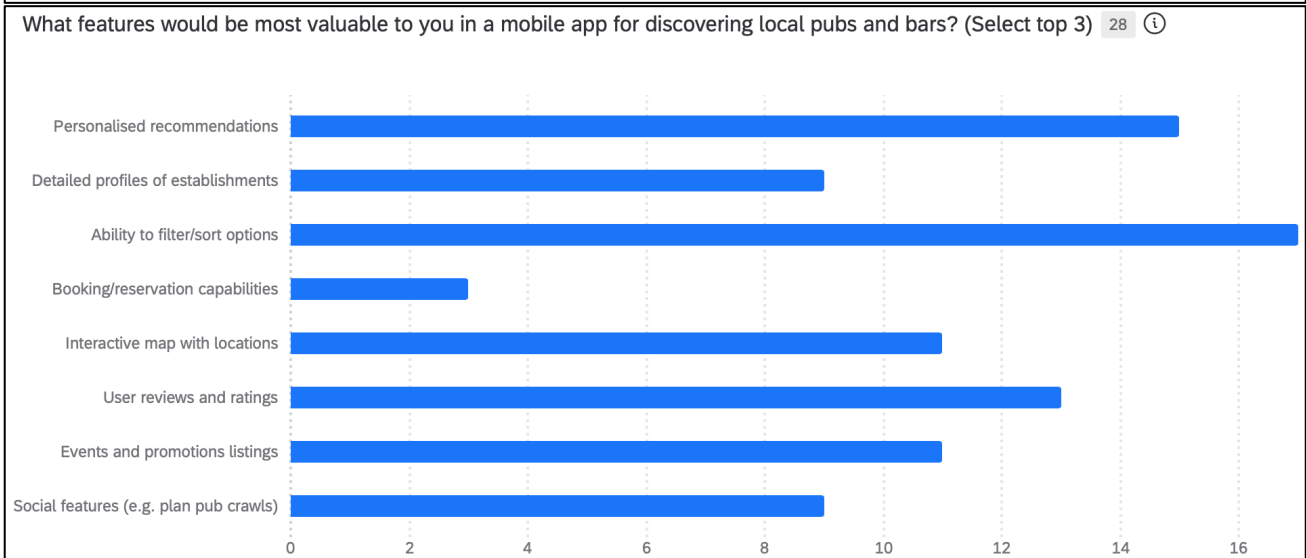
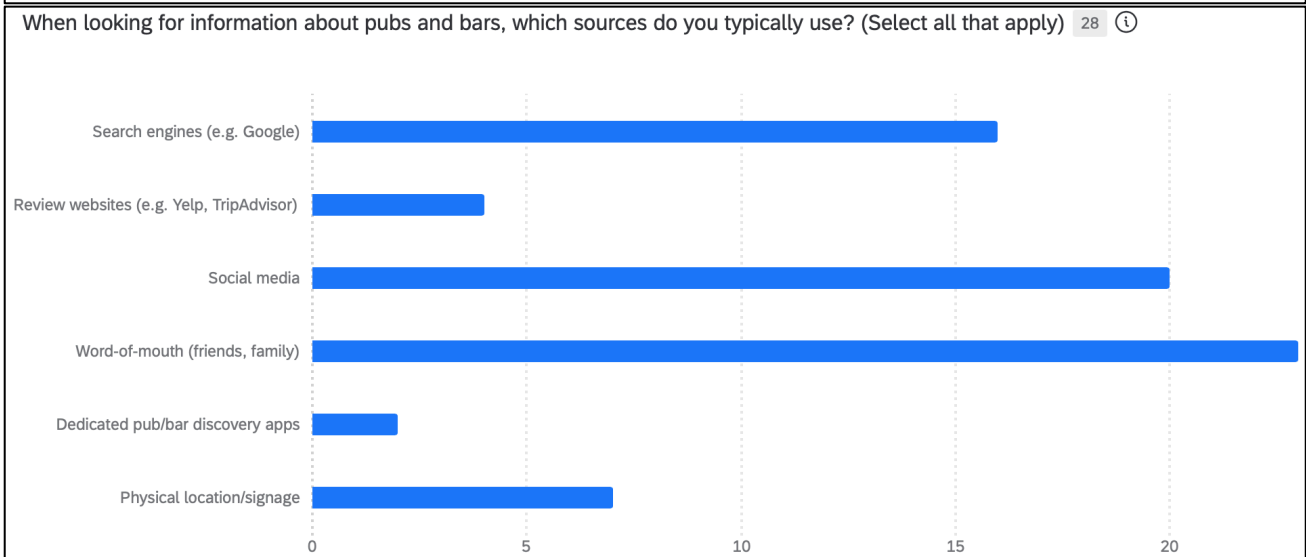
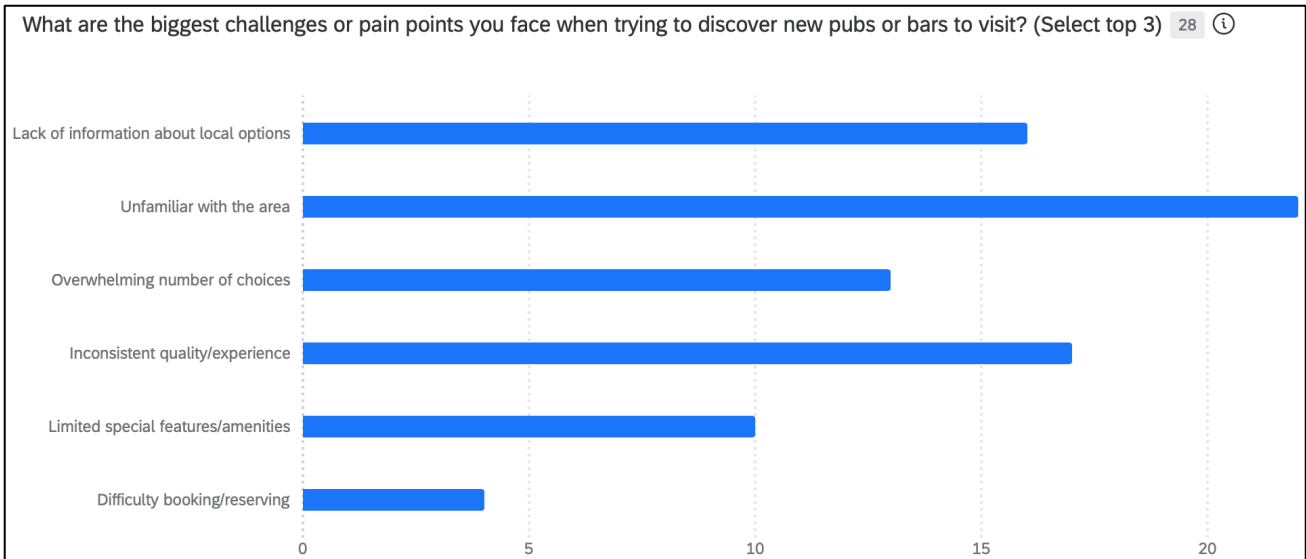


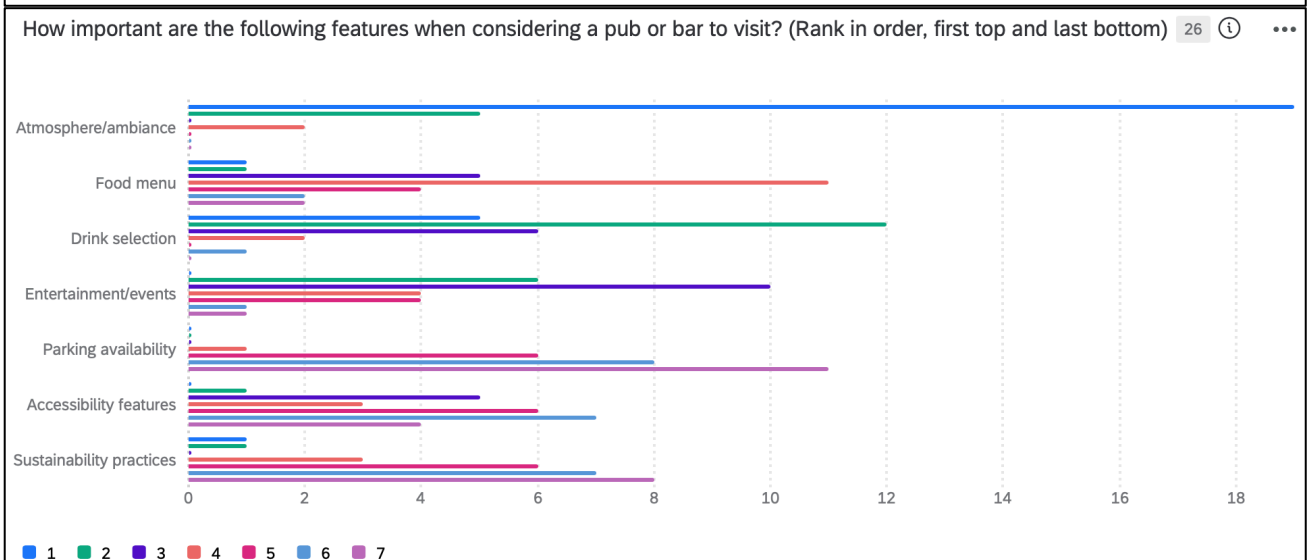
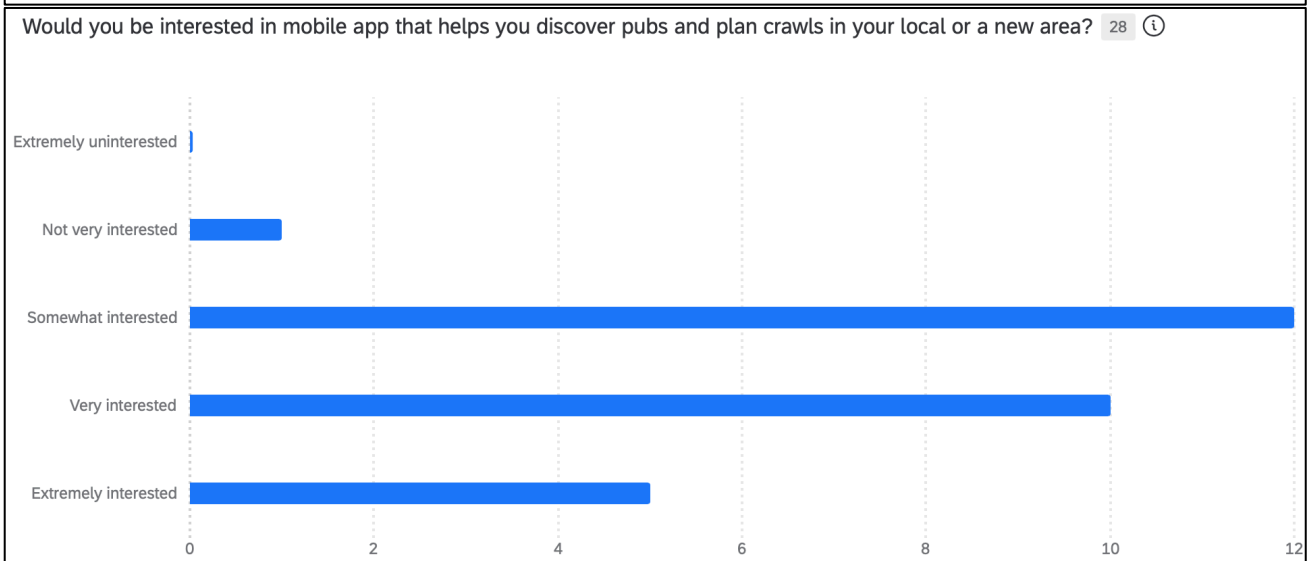
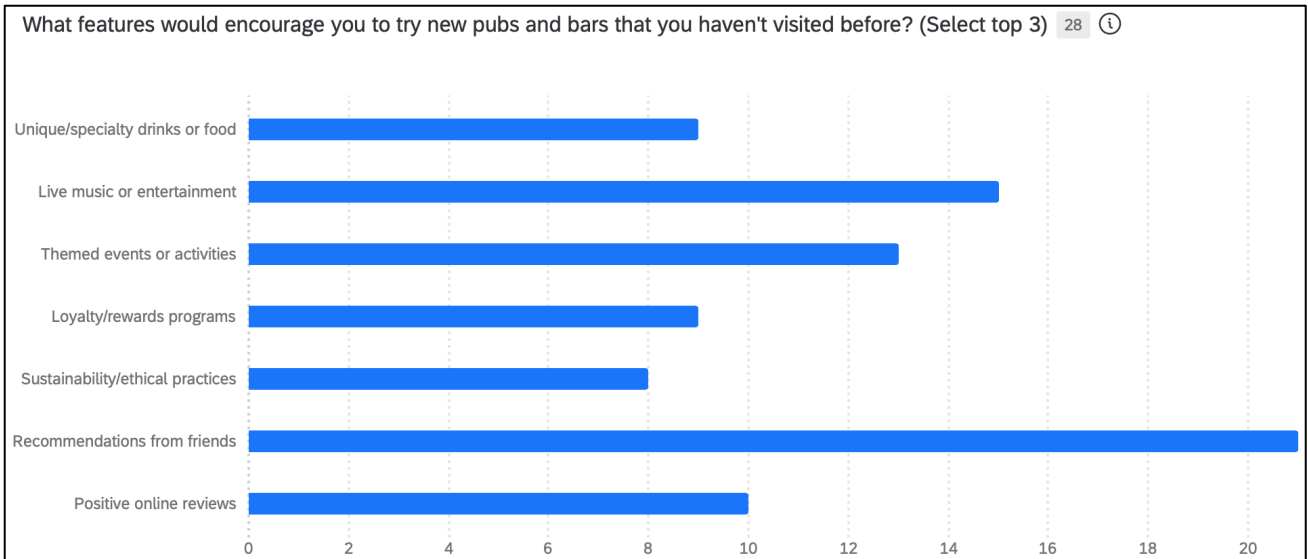
What is your gender? 28 ⓘ

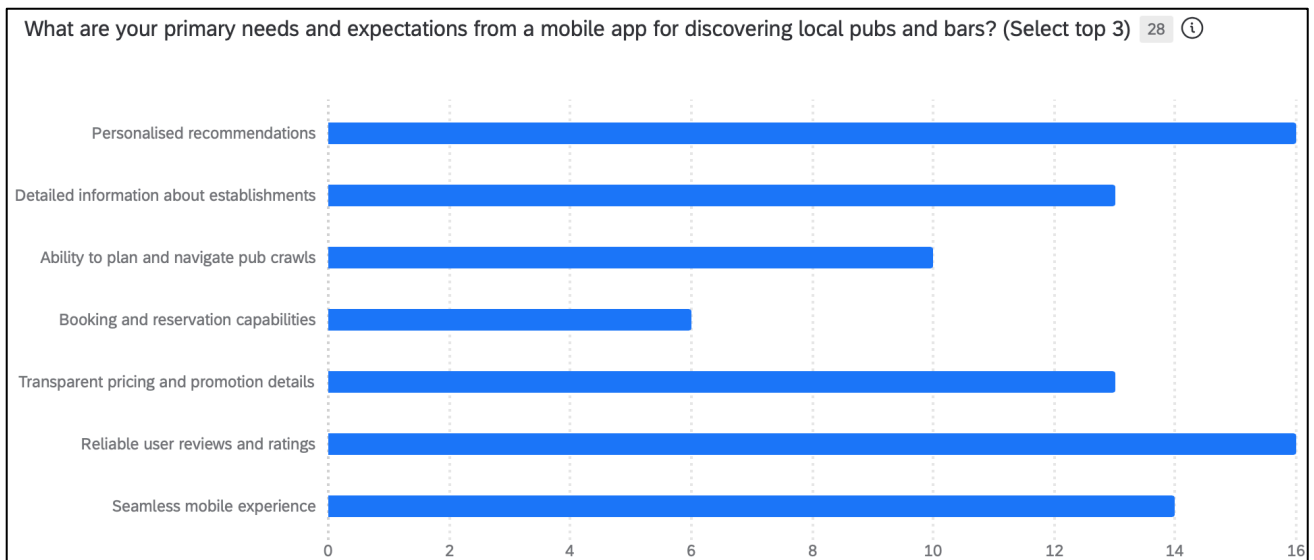












Appendix H: Elevator Pitch

BarHub is a mobile app designed for pub and bar enthusiasts who struggle to find new, unique establishments that cater to their preferences. By providing personalised recommendations, detailed venue information, and seamless pub crawl planning features, BarHub offers a user-centric solution that sets it apart from generic location-based services like Google Maps and Pub Finder, empowering users to discover and explore the best local pubs and bars while supporting these businesses in the competitive hospitality industry.