'Plan My Trip' mobile app meant to alleviate travel stress and reduce pre-travel anxiety

Motivation and Rationale

The Problem

Nowadays it is very common to go about our day to day lives constantly rushing from place to place, priding ourselves in keeping busy and productive. We introduce a large amount of stress and discomfort in our lives in an attempt to go out of our comfort zone. The result of this – total burnout. The next common choice is to travel, go somewhere exotic to escape the so-called "rat race" of life. However, as soon as we start researching travel destinations, and painstakingly planning our itineraries we are met with an excruciating amount of overwhelming information making any choice difficult. An American travel company conducted a survey in 2017 asking recent travellers (around 1000 people) about their recent travel experiences [1]. The results were shocking – 67% admitted experiencing stress due to "information overload", and thus were increasingly stressed about planning their trips. The trip also placed a strain on their relationships – 67% argued with a significant other during the vacation, which was admittedly a result of stress. Nearly a quarter of the respondents broke up with their significant other following the travel. However, most importantly – nearly half of the respondents admitted that having a ready-made day-by-day itinerary would greatly reduce travel stress and assist with planning.

To add on, it is important to point out that travel agents are known to earn commission on the trips they sell, therefore the recommendations received might not always be objective or tailored to suit your specific requirements. Travel agents also usually place bigger emphasis on the more expense-oriented aspects of travel i.e. hotel or plane bookings, rather than tackling stress, helping alleviate anxiety levels. Moreover, they usually ignore the roughly 50 million customer sized disabled people market who are very sceptical of travel agents as they do not possess the knowledge of what disabled people really need [2].

Existing Systems

There currently exist a number of travel-related apps, websites and services mostly seeking to obtain money from customers through commissions. However, based on my research – the purpose of most of them is just to provide information on available activities at a certain location. These services do not tailor these activities to a specific user experience that could have the potential to alleviate pre-travel stress and travel anxiety.

One of the most popular existing travel apps is TripAdvisor. However, it suffers greatly from information overload. I, personally, find it hard to navigate the app's UI due to the vast amount of duplicating offers that they try to sell to me in various means. The app does have a "plan your own trip" kind of interface, however, it is not user friendly and mostly takes a form of note taking.

Another system I discovered is called Inspirock, which aligns more with what I will attempt to create. Its principle is to provide you with a day-by-day editable schedule based on the type of trip you are expecting (i.e. relaxed or active). It also shows flights, hotels available to you so you could plan your whole trip using one interface. I believe, Inspirock has a lot of potential, however, it currently does not have a mobile app, which is essential for a traveller due to smartphones being more pervasive during trips than laptops. It also has rather limited filtering options to plan your trip – does not take into consideration your disabilities, whether travelling alone or with children, for business or whether you are an athlete, have certain dietary requirements etc.

My Approach

My proposal is to build a mobile app that would most importantly possess a powerful filtering feature allowing to provide the user with a very personal travel experience. It would include intensive filtering for special groups like: the elderly, people with disabilities, parents with children, businesspeople, athletes etc. as, I believe, certain groups have non-universal sets of requirements. The app would then build a painstaking daily schedule allowing the user to strictly follow it as that would provide constant distraction – routine emulation – effective means to tackle anxiety [3]. The user would also be allowed to build an own schedule or edit the automatically created one. Afterwards the user would be able to book a hotel through the app's interface, book plane/bus/taxi tickets to allow a smooth travel experience avoiding stress caused by badly booked/failed transportation procedures [5].

Moreover, the app would also include information about recent dangerous happenings within the desired travelling location as perceived risk of travel relating to safety and sociocultural reasons proved to influence desire to travel and possibility of travel anxiety [4]. I will also attempt to extract disability-friendly information to provide users with information on wheelchair access or any other accessibility related information as many admit tourism industry "not meeting their needs" [2].

Aim & Objectives

Aim

Build a mobile app allowing users to create custom day-by-day vacation itineraries to improve their travel experience, reduce stress and pre-travel anxiety.

Objectives

1. **Research current travel planning apps/tools and evaluate their flaws, probability to induce pre-travel stress.**

   This will allow me to better understand the travel industry and what the regular traveller is experiencing when prompted to plan a trip. Moreover, it will be an indication of features I should include in my own app alongside with features I should avoid. I will have achieved this objective when I finish analysing TripAdvisor, Inspirock and a few other significant travel services of choice.

2. **Conduct market research through anonymous questionnaires to determine demand and necessary features.**

   I will need to conduct a survey via SurveyMonkey addressing current stress/anxiety concerns and confirming my hypothesis that travel stress is apparent and leads to many negative experiences. More importantly I will determine whether a travel scheduler will be help alleviate travel stress for residents in the UK.

3. **Build a mobile app allowing the user to randomise/build an all-inclusive travel itinerary according to custom, painstaking filtering process.**

   The minimal functionality of my app is to create a powerful travel scheduling tool scraping multiple travel sites in order to find the best user recommendations. The basic version should also include booking flights, hotels, editing the schedule and having some risk assessment location information. I will achieve this objective when I deliver this functionality.

4. **Utilise machine learning to suggest alternative activities if the user is not following the travel itinerary.**

   Potentially I would like to include a context-aware feature detecting when a user is not following a schedule and suggesting alternative arrangements. This would work as a stress detective functionality assuming that if a user is not following the schedule an argument or something unexpected might have ensued. Due to many possibilities, the detour from the schedule might be easily misinterpreted, therefore this functionality should be able to be turned off.

5. **Organise a user group to test and determine the usefulness of the implemented model.**

   This will serve as an indicator whether my app lived up to peoples' expectations and whether I successfully interpreted survey results and implemented them accordingly. Success of this objective will also mean there is a market for travel scheduler apps and could provide possibility in business.

Background

Resource	Information
"Ebilities" tourism: an exploratory discussion of the travel needs and motivations of the mobility-disabled [2]	Description: This paper discusses travel difficulties disabled people face and their expectations for travel companies. Relevance: One big aspect of my app is to make travel more accessible to various edge groups. This paper will help me assess what features disabled people expect and my app will be able to outperform travel agents and companies due to mistrust and lack of research in the disabled client on their side.

Travel Anxiety and Intentions to Travel Internationally: Implications of Travel Risk Perception [4]	Description: This paper looks into various risks associated with travel and how they affect stress and anxiety levels. Relevance: My app's approach is to take preventative measures towards possible trip anxiety. This paper links travel safety, culture and sociocultural risks to stress experienced during the trip. It will help me determine which preventative information my app should display about a certain location to improve user's safety and thus reduce risk and stress.
jsoup: Java HTML Parser [9]	Description: Java library for manipulating data and scraping, parsing HTML. Relevance: My project will include a lot of data scraping. I will scrape sites, such as TripAdvisor, Google, SkyScanner to provide trip recommendations, hotel and flight offers and acquire data. Jsoup is an efficient parser and will be very necessary for the project.
Business Travel from the Traveller's Perspective: Stress, Stimulation and Normalization [5]	Description: This paper emphasizes different types of happenings causing feelings of anxiety and homesickness. It is a compilation interview responses about most frustrating travel concerns. Relevance: This paper will help me identify travel concerns for professionals travelling for business purposes. It has a few useful sections spanning from troubles experienced during the flight and arriving to family emergencies and offering a few solutions on how to tackle them. The paper will allow me to create a more powerful filter tool.
Developing Android Apps with Kotlin [8]	Description: A course made by Udacity partnered with Google about how to build Android Apps using Kotlin programming language. Relevance: This will help me familiarise with Android App development and follow Google Material Design. I will also learn Kotlin, which will ensure my travel scheduling app development bit runs more smoothly.
Travel Anxiety: Causes and Cures [7]	Description: An article about travel anxiety made by the Calm Clinic, medically reviewed by a practising Psychologist. Relevance: It will help me determine most common travel anxiety causes and help prevent them by providing the user with information on: efficient planning, packing tips (calculated according to the chosen trip), contingency tips.
Stats: Stress Causing 37 Percent Of Travelers To Cancel Or Delay Vacation [1]	Description: Article describing results of Wyndham Vacation Rentals study about vacationer statistics. Relevance: This article helped me determine the problem, my app's main purpose, and audience. It provides useful statistics for the 'preventative' tips section of my app encouraging me to include information on thoughtful spending, tips on how to get along during the trip etc.

Diagrammatic Work Plan
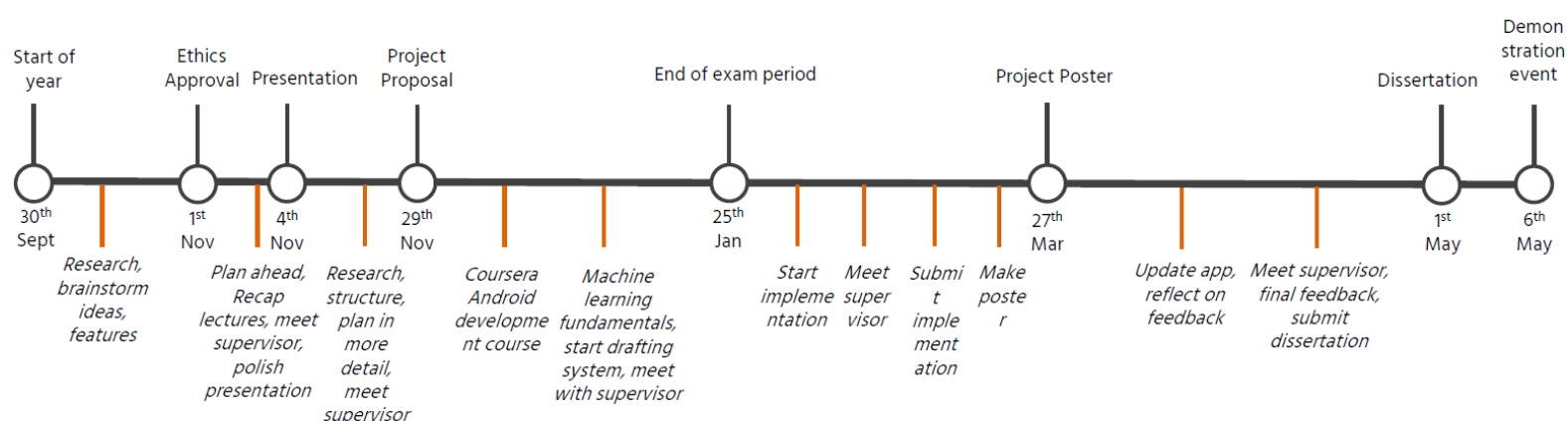
Work Done

To begin with, I have identified the problem and found relevant research to prove my claim. The survey done by Windham Vacation Rentals shows that stress levels are increasing with more than 51% surveyed vacationers feeling more stressed now than the previous year [1]. I have also hypothesized based on personal experiences that having a pre-made travel itinerary helps reduce travel stress and improve trip quality, which was also confirmed in the aforementioned survey by more than 50% participants. Furthermore, I have identified key playing existing apps/services in the field. While there exist many of them, I settled down with two – TripAdvisor and Inspirock. However, whilst both offer great functionality – both have severe flaws making them either useless at tackling travel-induced stress or being not powerful enough and not comfortable to use.

Moreover, I have identified various "edge groups", for which travelling is more complicated or risky, therefore induces more stress [2]. The elderly, people with disabilities, parents travelling with children, athletes, businessmen - these are the users to find my app most useful as I am going to attempt to make travelling more accessible and comfortable for them.

Lastly, I have discussed the necessary base technologies/software with my supervisor and settled with a skeleton scheme of how my app will be laid out. I will be using Android Studio and Kotlin instead of Java for efficient and responsive app access, Google API and APIs of relevant travel sites (i.e. TripAdvisor) to scrape various content using jsoup [9], FireBase and Room DB for Cloud and local (offline) content access, Agantty, Any.do for scheduling and keeping on top of work and Survey Monkey for market research.

Future Plans

Until the end of first Semester I will be completing the dissertation documentation parts that I have already done whilst simultaneously finalising research and extracting useful features/functionality from similar systems. I will send out an anonymous online questionnaire regarding travel stress and pre-travel anxiety potentially hoping to capture various user groups and ages. There might be issues with having a decent amount of responses to ensure validity of data and diverse user groups captured. After that I will start drafting my application and designing its UI using moodboards, fontboards and storyboards. I will attempt to create the first concrete prototype UI suggestion and get feedback from my supervisor. Amidst all this I will be completing an Android development with Kotlin course to prepare myself for the implementation period. During the Exam Period activity will be restricted, however, I will try to have a short meeting with my supervisor to better plan next steps based on current progress.

After the Exam Period, I will begin the implementation phase. It will potentially be the most challenging part of the project due to not having a lot of experience with Android App Development and having other modules running simultaneously. I will implement the GUI design in Android Studio, intensive filtering feature (unsure how I will tackle this one yet) and begin the scraping process, which might be time intensive due to having to crawl many differently laid out sites, and Android Studio running rather slowly. After finalising each feature I will run tests and meet my supervisor consistently for feedback, potentially showcase the app to other academic staff.

Risks & Contingencies

I have allocated around two months for the implementation bit of my project, which might be scarce considering I lack experience in Android development, and it is my first time using Kotlin. However, realistically it might be that due to having other coursework at the same time – two months is around the best I can get. Therefore, I am trying to minimise this risk by pre-designing my app until January and learning Android basics so I have a clear plan for implementation when the time comes. Unavoidable risk – Android Studio is resource intensive and my computer will be slow at running it, which will delay development. I might not be able to meet all my objectives, especially objective number 4, because it is a "premium" feature, not included in estimated base deliverables. Sometimes I may compromise the quality of other coursework to carry out the dissertation due to tight deadlines or vice versa. Lastly, bad database implementation or misinterpretation of API "Terms of Service" may lead to data breaches and personal information leakage of potential users, which I will try to prevent by rigorous testing/feedback loops.

References

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