



Prototype



"Explore with ease, your itinerary, your way"

Fall 2025 - CS411
Team Copper

Your Itinerary

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Team Biography



Crystal Rivas is a second degree seeking student in Computer Science at ODU with a background in math education. Her expertise in problem solving drives the transition and aims to develop innovative and impactful solutions.

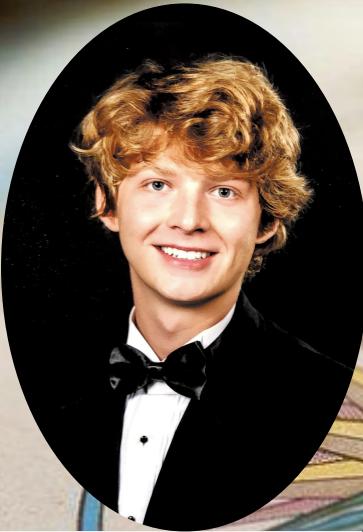


Stephen Usselman is a senior at ODU majoring in computer science. He is looking to pursue a career as a Software Developer after university.



William Mbandi is a senior at ODU majoring in computer science with a minor in cyber security. Wants to work as a Software Developer after he graduates.

Team Biography



William Poston is a senior at ODU majoring in computer science with a minor in data science. After school, he dreams of being an AI prompt engineer.



Jandra D. Arias Tavarez is a second degree seeking student at ODU working on her bachelor in Computer Science. She aspires to work as a Software Developer after graduating.

Team Biography



Balemuul Ymamu is a senior at ODU majoring in Computer Science. He is eager to gain hands-on experience in tech field and look forward to working as a Software Developer after graduation.



Fredrick Terling is a senior at ODU majoring in Computer Science. He is currently hoping to get his foot in the door for most tech job opportunities but dreams of being a Game Developer and ultimately a Game Producer.

Team Biography



Jacob Cook is an ODU Computer Science alumnus, IT Instructor at the Southern Virginia Higher Education Center, and founder/CEO of Southside Tech Services. He has built a career spanning software development, general IT, and hands-on education, while also guiding students and businesses in adopting technology effectively. Jacob is passionate about mentoring, and he enjoys helping students bridge the gap between classroom learning and the real-world challenges of a career in technology.

Roles

Name	Role
Stephen Usselman	Software Developer and Product Design
William Poston	Software Developer and Webmaster
Crystal Rivas	Software Developer and Database
Jandra D. Arias Tavarez	Software Developer and Database
Balemual Ymamu	Software Developer and Database
William Mbandi	Software Developer
Fred Terling	Software Developer
Jacob Cook	Mentor

Problem Statement

When travelers plan their own trips, all the time, effort, and stress- compounded further by the constraints of group travel- can sour the experience. While the time and effort can be cut down with travel agents and tour guides, they lack the personalized touch of planning for yourself and your needs. 76% of travelers turn to planning applications and websites to make the experience easier, but they only provide generic itineraries that lack personalization and flexibility [11]. These leave out the hidden gems that make a trip memorable and also adapt poorly to unforeseen complications. Travelers are left with having to choose between having an expensive or time-consuming planning stage, or they settle for a trip that is just not the experience they were hoping for.

Problem Characteristics



Choice Overload

- Consumers are given simply way too many options with no easy way to narrow them down.
- Even after you choose one option you find yourself having to make many more choices over the duration of your trip.

Generic Itinerary

- Whether planning it themselves or otherwise, individuals are lead to the most popular locations and attractions, not necessarily the ones the consumer would most prefer.
- Finding that great local spot or hole in the wall location can be a major highlight of any trip.

Rigid Plans

- An unexpected circumstance can throw all your carefully laid plans into disarray and leave you scrambling if you do not already have a backup.

Tour Guides

- Besides being expensive , tour guides lack the personalized touch often leaving travelers uninterested in the activities that were picked out.
- For introverts, tours can feel too overwhelming as it is usually a large group of people and it can be very difficult to accommodate any needs.

Group Frustrations

- Groups need a way to coordinate and share their plans to prevent conflicts and make suggestions.

Solution

Itiner-Ease is a mobile application designed to simplify and personalize itinerary planning for travelers, new residents, and spontaneous adventurers. Itiner-Ease allows users to generate custom itineraries based on their location and preferences. Users can filter activities, discover overlooked local treasures, and adjust plans in real time. Unlike existing solutions, Itiner-Ease combines personalized AI-driven user exploration with insights from verified local experts to create dynamic real-time itinerary suggestions for both individual and group travelers.

Personalized Itineraries



Personalization Profiles

- **Preferred Activities:** Whether you are a picky eater, looking for a more niche activity, or want to experience the local's favorites we take all these preferences into account when building your itinerary.
- **Customization Options:** Perhaps you want to eat a different kind of food each day or you have specific budgetary restraints you are trying to work under. We have options to modify the recommendations to account for these concerns.

AI-Driven Recommendations

- **Similarity Clustering:** Before our system can get a proper gauge on what exactly takes a place from simply good to one of your new favorites, we rely on users with similar reported interests to base Itiner-Ease's recommendations.
- **Learned Tastes:** As Itiner-Ease gets on your tastes, it gets even better at prioritising the options that you would enjoy the most.

Upgrade With Local Expertise



- **Local Guidance** - Users might be satisfied with just the recommendations our AI creates them, but nothing beats the knowledge of people who actually know the area.
 - Travelers pay a nominal fee to have their itinerary looked over and upgraded by our local experts. In addition some local experts may offer further tiers for personal tours, an emergency contact or other benefits.
- **Why Become a Local Expert?** - These Local Experts are an integral part of the Itiner-Ease ecosystem, so it is important that they are incentivized properly.
 - The local experts will make the majority of the fee, with Itiner-Ease taking a small cut. Itiner-Ease will also take advantage of these local expert recommendations to refine our AI recommendation algorithm.

Collaboration and Dynamic Updates

Group Profiles

- **Joint Itineraries:** Going on a family trip or even just a trip with friends? Itiner-Ease can use multiple user profiles to generate an itinerary, taking all your preferences, constraints, and a group voting system to develop a plan that works for all parties.
- **Plan Sharing:** Itiner-Ease can share all or only part of your itinerary to coordinate activities with others in the app or outside it.

Dynamic Itinerary Updates

- **Avoid Disruptions:** It is impossible to plan for everything but that does not mean we cannot minimize it where possible. Itiner-Ease takes a proactive approach to monitor local conditions and notify you of any concerns.
- **Hot Spots:** Relying on reviews means you might miss out on the exciting new location that just opened. If users with interests similar to you are rating it highly recently we may recommend an optional switch in your itinerary.

Explorer Rewards

Local Discovery: Users can create positive reviews for their favorite locations and earn rewards if other travelers also end up enjoying the experience.

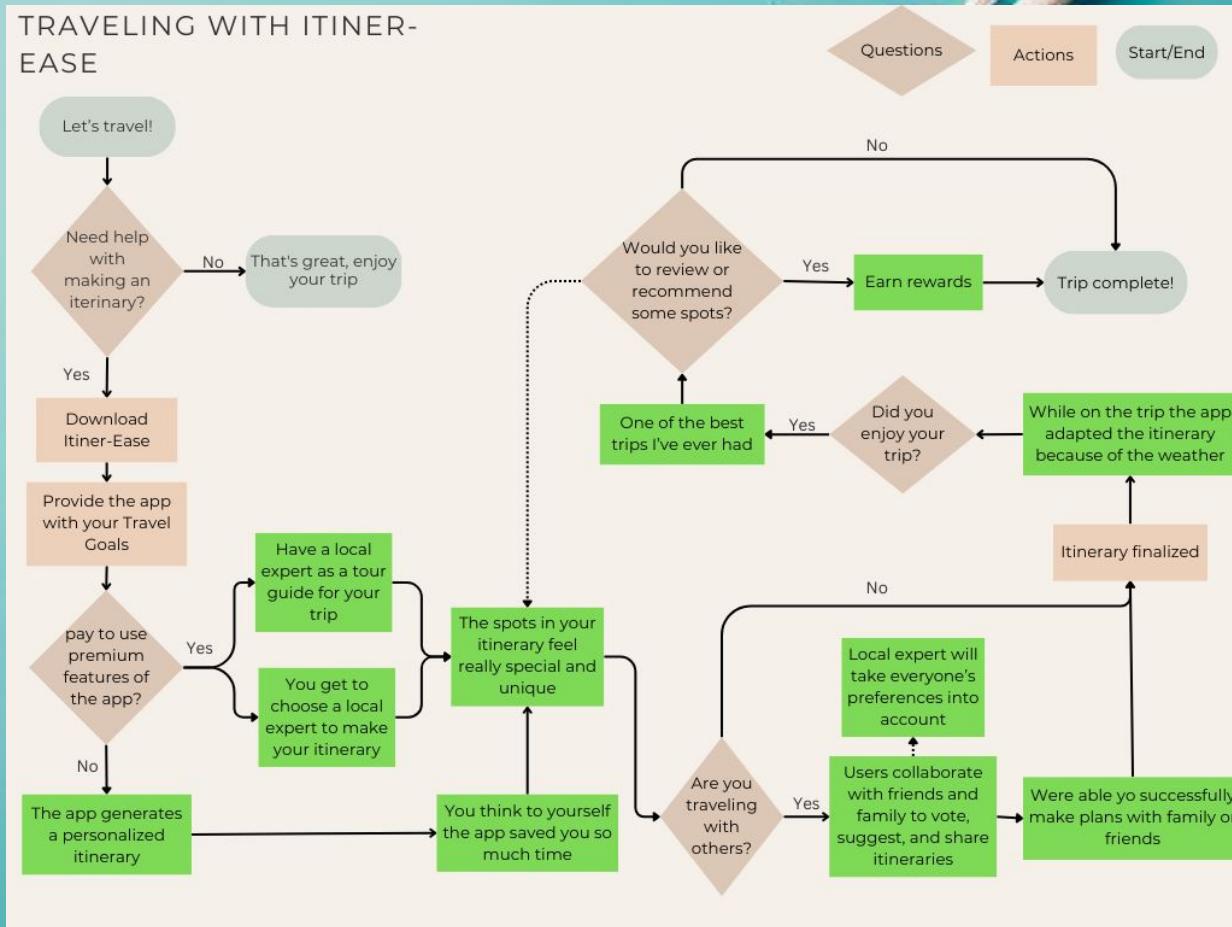
Sponsored Businesses: Itiner-Ease will partner with local businesses to increase their visibility in exchange for benefits to our rewards members.

Reward Benefits: Users can use their rewards to spend on our premium content such as discounts at participating locations, local expert guidance, and more.

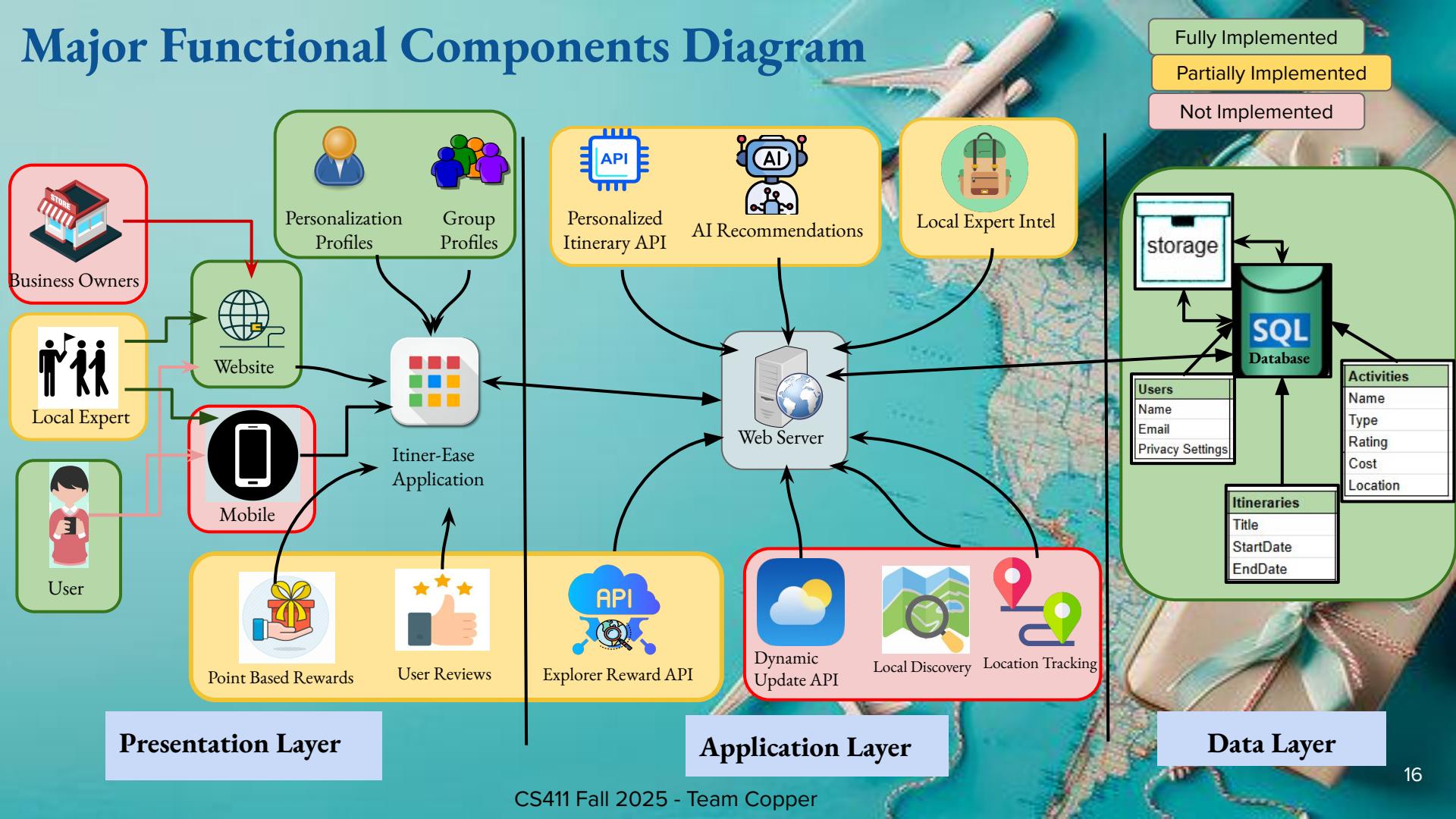


Solution Process Flow

TRAVELING WITH ITINER-EASE



Major Functional Components Diagram



Development Tools

Frontend Languages	HTML, CSS, JavaScript
Backend Languages	PHP
Integrated Development Environment (IDE)	Visual Studio Code
AI Development Tool	OpenAI
Version Control	Git through GitHub
Continuous Integration / Deployment (CI)	GitHub Actions and Workflows
Collaboration	Jira
Database	SQLite
Documentation	PHPDoc, JSDoc

Development Dependencies

UI Framework	Filament
Web Framework	Laravel
Testing Frameworks	PHPUnit
General Libraries	Blueprint from Laravelshift
Machine Learning Libraries	TensorFlow, Scikit-Learn, PyTorch ~
Application Programming Interfaces (API's)	Google Maps ~
Web Server Software	Nginx
Server Hosting	DigitalOcean
Simulation Containers	Docker

Competition Matrix

Feature	Itiner-Ease	wanderlog	TROUPE	FRIENZY	TripIt from Concur	Booking.com
Collaborative Itinerary Management	✓	✓	✓	✓		
Hidden Gems	✓	✓		✓		✓
AI-Driven Recommendations	✓	✓	✓	✓	✓	✓
Dynamic Itinerary Updates	✓					
On-Demand Local Expertise	✓					
In-App Booking System		✓			✓	✓

Implementation: full ✓ partial ✓

User Roles

Role	Admin/Developer	Traveller	Local Expert	Business
Tasks	<ul style="list-style-type: none">• Resolve user issues• Keep app content up to date• Assist in local expert and business verification• Ensure user data privacy• Data analysis on app usage and trends	<ul style="list-style-type: none">• Create account as a traveller• Provide personal preferences and interests• Explore destinations and create itineraries• Read and leave reviews• Create group itineraries with other travellers	<ul style="list-style-type: none">• Create account as local expert• Provide verification of residence in area• Create itineraries based on customers' preferences• Lead travellers out on tours• Read reviews on destinations as well as themselves	<ul style="list-style-type: none">• Create account as local business• Provide proof of ownership for verification• Register and inform travellers of events• Advertise business• Read reviews on themselves

RWP vs Prototype vs Current Plans Feature Table

Feature Groups	Features	Real World Product	Initial Prototype	Current Plans
Account Management	Login/Authentication	Fully Implemented	Fully Implemented	Demo 1
	Account Creation/Deletion	Fully Implemented	Fully Implemented	Demo 1
	Account Management	Fully Implemented	Partially Implemented	Demo 1-2
	Notifications	Fully Implemented	Eliminated	Post
	Payment Information	Fully Implemented	Eliminated	Post
Itinerary Creation	Personalized Profiles	Fully Implemented	Fully Implemented	Demo 1-2
	AI Recommendations	Fully Implemented	Partially Implemented	Demo 2-3
	Business/Location Reviews	Fully Implemented	Partially Implemented	Demo 2
	Itinerary Customization	Fully Implemented	Partially Implemented	Demo 2-3
Public/Group Profiles	Joint Itineraries	Fully Implemented	Fully Implemented	Demo 3
	Plan Sharing	Fully Implemented	Eliminated	Post
	Choice Voting and Selection	Fully Implemented	Eliminated	Post
Dynamic Itinerary Support	Weather Updates	Fully Implemented	Eliminated	Post
	Local Event Tracking	Fully Implemented	Eliminated	Post
	Dynamic "Hot Spot" Advocation	Fully Implemented	Eliminated	Post

RWP vs Prototype vs Current Plans Feature Table

Feature Groups	Features	Real World Product	Initial Prototype	Current Plans
Explorer Rewards	Discounts and Coupons	Fully Implemented	Fully Implemented	Demo 3
	Review Goals	Fully Implemented	Eliminated	Post
	User Ratings	Fully Implemented	Eliminated	Post
Data Analytics and Reports	AI Preference Learned Behavior	Fully Implemented	Eliminated	Post
	Profitability Metrics	Fully Implemented	Eliminated	Post
	Income Summary	Fully Implemented	Eliminated	Post
	Popularity Trend Visualization	Fully Implemented	Eliminated	Post
System and Data	Review Moderation Tools	Fully Implemented	Eliminated	Post
	Algorithm Updates	Fully Implemented	Eliminated	Post
	Health and Security Monitoring	Fully Implemented	Eliminated	Post
	Full Database Access	Fully Implemented	Fully Implemented	Demo 1
Local Expert	Local Expert Selection	Fully Implemented	Fully Implemented	Demo 3
	Local Expert/User Correspondence	Fully Implemented	Eliminated	Post
	Local Expert Reviews	Fully Implemented	Eliminated	Post
	Character Reviews	Fully Implemented	Eliminated	Post

Stories to Features: Account and Services

Full Implementation
Partial Implementation
RWP Implementation

Account and Services	Login Authentication	As a traveler or local expert, I would like my account to have security measures to prevent unauthorized access
	Account Creation/Deletion	As a traveler or local expert, I would like an account to store my information As a traveler or local expert, I would like to be able to delete my account if I no longer have need of it.
	Account Management	As a traveler, I would like to be able to go back and change my preferences after account creation. As a local expert, I would like a way verify my expertise so that potential travelers know the quality of my advice. As a local expert, I would like a way to be able to update my specialities after account creation and expert verification. As a local expert, I would like a way to manage my availability so people only request my services when I am available.
	Notifications	As a local expert, I would like to be notified when a user has requested my advice so I can get back to them. As a traveler, I would like to be notified if there had been any changes made or recommended for my itinerary.
	Payment Information	As a user, I would like a way to securely book and pay for services through the platform.

Itinerary Creation

Itinerary Creation	Personalized Profiles	<p>As a local expert, I want to know if a group needs special provisions for children or other members.</p> <p>As a traveler, I want to record my preferences so that I am recommended things that I want to do or see.</p> <p>As a traveler, I want to be able to indicate activities that I do not wish to do or want to avoid.</p> <p>As a traveler, I want to indicate any allergens, sensitivities, or intolerances that I have.</p> <p>As a local expert, I want to be able to view my traveler's preferences so that I may make specific recommendations.</p>
	AI Recommendations	<p>As a traveler, I want to be able to rate and give feedback on recommendations so the AI can improve its recommendations</p> <p>As a traveler, I want to receive AI-generated activity suggestions based on my previous trips</p> <p>As a traveler, I want to only be offered activities and locations that actually exist and not "AI hallucinations"</p> <p>As a traveler, I want to set budgets that will be taken into account with my recommendations.</p> <p>As a local expert, I would like to see the recommendations the AI made for the traveler I'm assisting.</p>

Itinerary Creation Continued

Business Location Reviews	As a traveler, I want to leave reviews on places I have been to help other users.
	As a traveler, I want to be able to anonymously review locations.
	As a traveler, I want to be able to include pictures in my reviews to give better context.
	As a traveler, I want to be able to read reviews from other travelers and locals.
	As a business owner, I want to read reviews to see what people like and what I can improve on.
Itinerary Customization	As a traveler, I want to be able to input preferences for users who do not have an account
	As a traveler, I want to have trip specific preferences without having to override my existing preferences.
	As a traveler, I want to search for businesses that participate in the rewards program so that I can maximize my points.
	As a traveler and local expert, I would like tools to add, remove, and move around activities on the generated itinerary.

Group Profiles and Local Experts

Group Profiles	Joint Itineraries	As a traveler, I want to have my activity recommendations be based on all groupmates preferences. As a local expert, I want to know the size of a group before I recommend them anything.
	Plan Sharing	As a traveler, I want to be able to share my itinerary and view others. As a traveler, I want to invite others to my itinerary or trip.
	Choice Voting	As a traveler, I want to have a way for my group members to vote on activities.
	Expert Selection	As a local expert, I want to display my specialties so that I can be matched with travelers who need my expertise. As a traveler, I want to access a list of local experts, so that I can choose someone who best matches my needs.
Local Experts	Two-Way Correspondence	As a local expert, I want to be able to suggest real-time changes to a traveler's itinerary when I see opportunities. As a traveler, I want to be able to communicate with my local expert if I have any questions about their recommendations.
	Expert Reviews	As a local expert, I want to be able to leave reviews explaining my choices and changes to an itinerary. As a traveler, I would like an easy to reach location to view the expert reviews that I have paid for.
	Character Reviews	As a traveler, I would like a way to review local experts directly to rate the advice that they offer. As a local expert, I would like to access my reviews and ratings to see how I can improve my services.

Dynamic Updating and Explorer Rewards

Dynamic Updating	Weather Updates	As a traveler, I want to be notified in advance when weather conditions would disrupt my plans.
	Congestion Tracking	As a traveler, I want my itinerary to offer alternatives if a location or activity is going to be overcrowded. As a business owner, I would like to see levels of congestion in the area around my business.
	"Hot Spot" Advocating	As a traveler, I would like my itinerary to update if a better option becomes available before my trip.
Explorer Rewards	Discounts and Coupons	As a business owner, I want to offer group packages to larger group sizes. As a traveler, I want to a way to be rewarded for being an Itiner-Ease customer. As a traveler, I want to view my reward point balance so that I can track my progress toward rewards. As a business owner, I want to offer special promotions or bonus points so that I can incentivize repeat visits.
	Business Interface	As a business owner, I want to manage my business rewards profile on the platform As a business owner, I would like to claim a business if it is mine and verification process to ensure it is not falsely claimed.
	Review Goals	As a traveler, I want to be rewarded for taking the time to leave reviews and improve Itiner-Ease

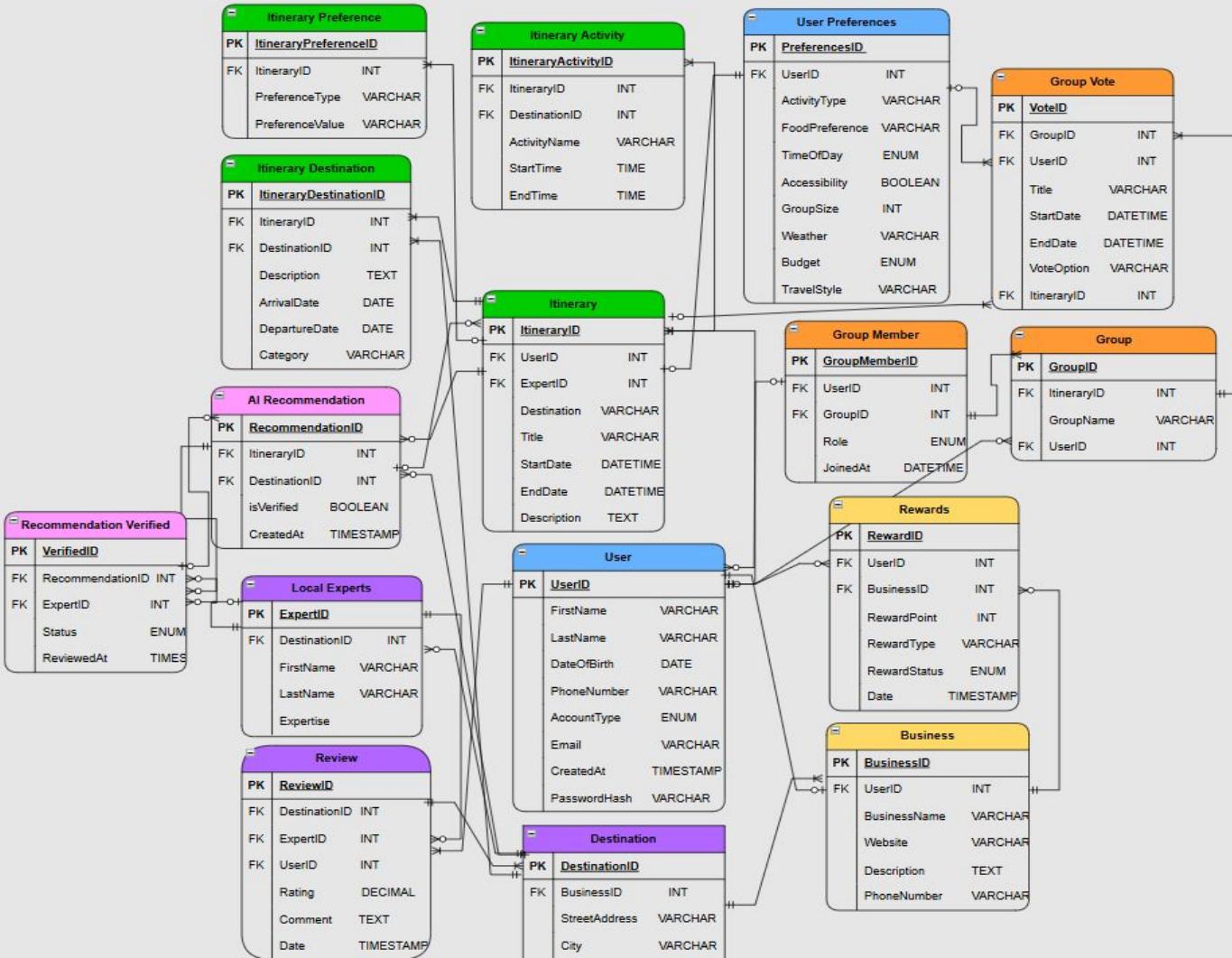
Stories to Features:

Data Analytics and Reports	Learned Preference Behavior	As a business owner, I want to focus on advertising my business to users who are interested in it already.
	Profitability Metrics	As a business owner, I want to see analytics on customer engagement through the reward program.
	Local Expert Interface	As a local expert, I would like a way to view and analyze my earnings from giving local expert upgrades. As a local expert, I would like a way to view how often travelers view my profile versus choose my services.
	Popularity Trends	As a business owner, I want to see the preferences of travelers who visit nearby so I can tailor my offerings. As a local expert, I want to track trending reviews to find new places.
System and Data	Health and Security Monitoring	As an administrator, I would like a way to monitor when Itiner-Ease data is being accessed. As an administrator, I would like a way to monitor the uptime of various Itiner-Ease services.
	Full Database Access	As an administrator, I would like a way to access entries in the database directly so that I can manage them properly.

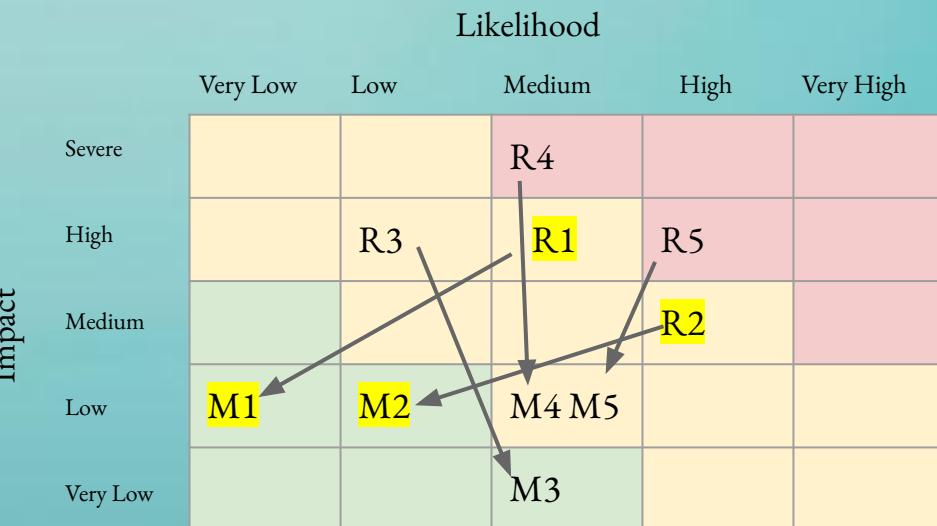
User Stories to Tasks

Feature	User Story	Task
Login Authentication	As a traveler or local expert, I would like my account to have security measures to prevent unauthorized access	<ul style="list-style-type: none"> • Login/Authentication Service
Account Creation	As a traveler or local expert, I would like an account to store my information	<ul style="list-style-type: none"> • Account Creation Service • Account Management Service
Personalized Profiles	As a traveler, I want to record my preferences so that I am recommended things that I want to do or see.	<ul style="list-style-type: none"> • Personalized Profile Creation Service • Personalized Profile Interface
Business Location Reviews	As a traveler, I want to be able to read reviews from other travelers and locals.	<ul style="list-style-type: none"> • Review Interface
Itinerary Creation	As a traveler, I want to view all the activities and locations I will visit in one package	<ul style="list-style-type: none"> • Itinerary Creation Interface
Itinerary Customization	As a traveler, I want to be able to input preferences for users who do not have an account	<ul style="list-style-type: none"> • Itinerary Management Interface
Joint Itineraries	As a traveler, I want to have my activity recommendations be based on all groupmates preferences.	<ul style="list-style-type: none"> • Group Itinerary Feature
Expert Selection	As a traveler, I want to access a list of local experts, so that I can choose someone who best matches my needs.	<ul style="list-style-type: none"> • Local Expert Itinerary Feature
Full Database Access	As an administrator, I would like a way to access entries in the database directly so that I can manage them properly.	<ul style="list-style-type: none"> • Admin Panel with Database Access

Database Schema



User Risk Matrix



Risks

Prototype Risks

R-1: User finds the app overwhelming or confusing to use.

R-2: User receives recommendations that don't match preferences.

R-3: User is in an area with poor internet connectivity.

R-4: Users abandon the app due to lack of engagement.

R-5: Users won't trust strangers to give advice and personalized tours.

Mitigation

M-1: Ensure an intuitive UI/UX with guided onboarding and simple navigation.

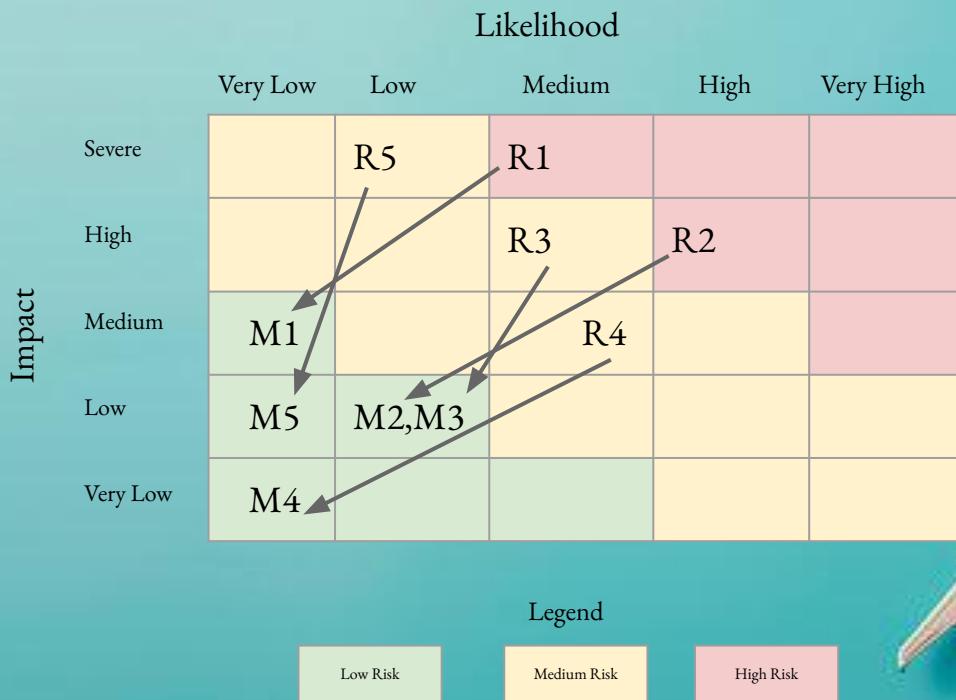
M-2: Allow users to personalize preferences and provide feedback to improve recommendations.

M-3: Implement offline mode with cached recommendations and maps.

M-4: Implement push notifications, gamification, or incentives like discounts to keep users engaged. Integrate these features with our premium services and our commercial partners to reward users and drive revenue.

M-5: Provide local expert verification and reviews similar to Uber/Lyft.

Customer Risk Matrix



Risks

R-1: Investors see the app as too niche or risky to fund.

R-2: Businesses/advertisers don't see value in paying for promotion.

R-3: Businesses feel underrepresented or struggle to get visibility on the platform.

R-4: Advertisers worry about ad placements being ineffective or intrusive.

R-5: Local experts try to refund products to cut out Itiner-Ease.

Mitigation

M-1: Present clear market research, growth potential, and revenue streams (ads, partnerships, premium features).

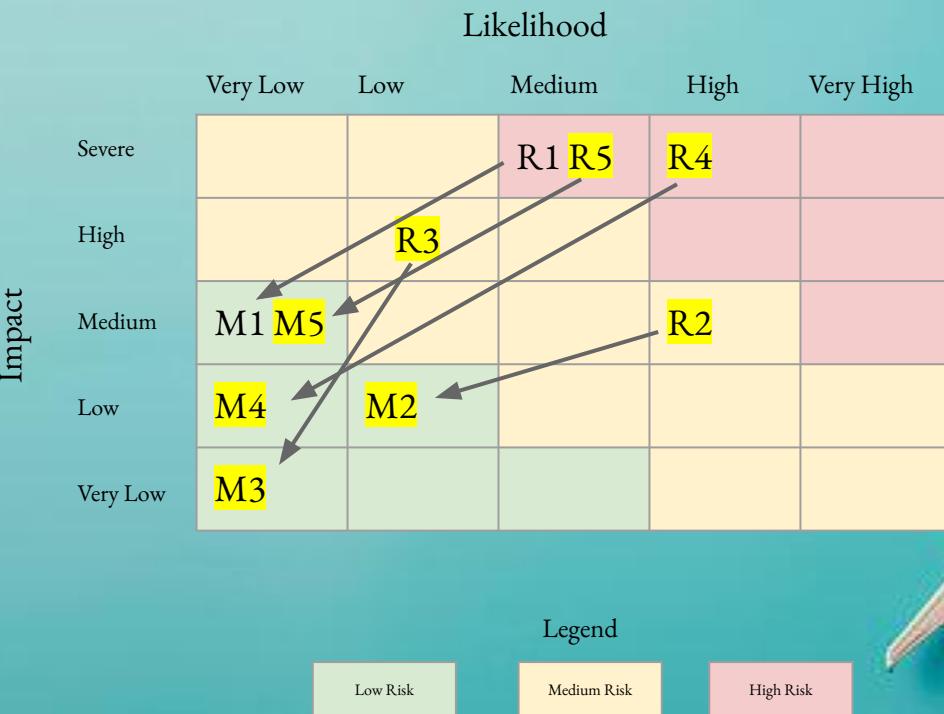
M-2: Offer analytics on user engagement, conversion rates, and ad performance to prove return on investment.

M-3: Provide affordable listing options, featured spots, and local partnerships.

M-4: Use non-intrusive native ads and give businesses targeting options to reach the right audience.

M-5: Strict refund policy preventing unpaid use of itineraries.

Technical Risk Matrix



Risks

R-1: Not enough local support to find obscure locations.

R-2: Application software issues.

R-3: User declines to share location/GPS services.

R-4: Security breach or data leak.

R-5: AI hallucinations and made up data.

Mitigation

M-1: Integrate with existing services like Google Maps, employ web scraping, hire/incentivize local experts to gather data on obscure locations. Offer deals with local businesses.

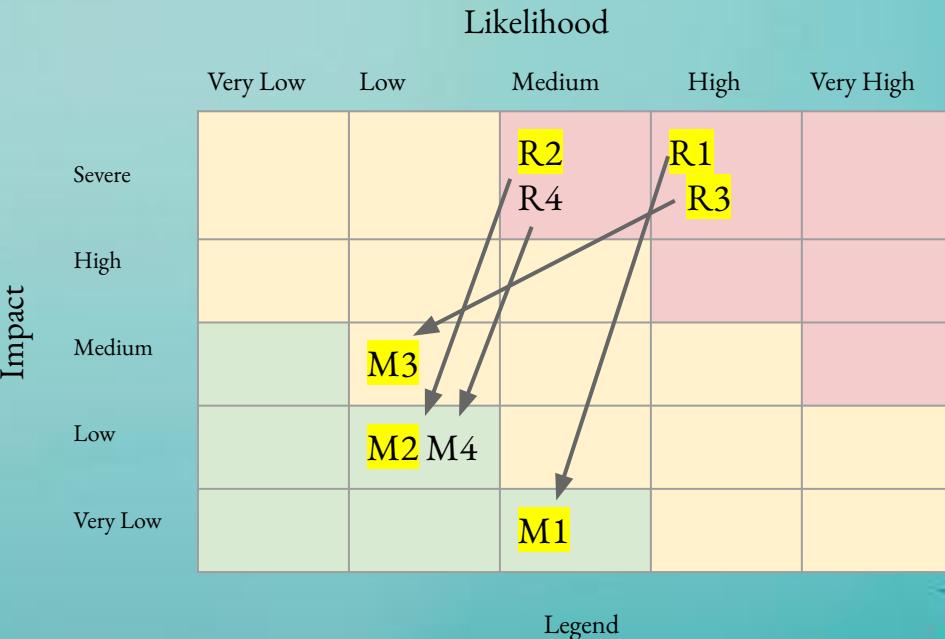
M-2: Prioritize application performance.

M-3: Allow users to search by city/zip code.

M-4: Practice cybersecurity hygiene.

M-5: Local experts provide human verification on paid products.

Legal & Security Risk Matrix



Risks

R-1: Unauthorized sharing of sensitive user data, including age, location, and preferences.

R-2: Potential legal issues arising from differences in religious beliefs, customs, and local laws.

R-3: Health risks related to pre-existing medical conditions, such as allergies or injuries from recommended activities.

R-4: Users' events get cancelled after they already paid for a local expert.

Mitigation

M-1: Itiner-Ease will collect only the necessary data with explicit user consent.

M-2: Users will be encouraged to research local laws, while the app will provide relevant legal and cultural information.

M-3: Itiner-Ease will not be liable for any health concerns. Itiner-ease will make publicly available allergen information available to the user, but it is up to the user to verify this information themselves.

M-4: Intiner-Ease will only provide refunds for any cancellations with a minimum of 48 hours notice.

Sprint Breakdown

Process	Sprint 1		Sprint 2 & Sprint 3			Sprint 4 - Sprint 7						Sprint 8		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Initial Setup & Framework														
Interface Development														
Feature Development														
Admin, Testing, & Documentation														
Deployment & Demos														

Phase 1 : Demo 1

Sprint 1 (Week 1-2)

Setup & Planning

Goal: Set up project infrastructure and establish team workflow.

- Create Github repository
- Setup Jira board
- Decide on tech stack and framework

Sprint 2 (Week 2-3)

Authentication & Server Setup

Goal: Build secure login and deploy working environment.

Features: Login/Authentication(Traveler & Local Expert)

- Setup DigitalOcean server
- Create blueprint(Filament mockup)
- Create frontend login forms
- Validate input on client and server

Sprint 3(Week 3-5)

Account & Profile Management

Goal: Enable user registration and personalization.

Features: Account Creation, Account Management, Personalized Profile Preferences

- Registration form and backend logic
- Profile update/delete
- Store preferences in database

Phase 2 : Demo 2

Sprint 4 (Week 5-7)

Reviews & Base Itinerary Builder

Goal: Enable user-generated reviews and start itinerary building.

Features: Business Location Review, Itinerary Creation

- Select Type of User
- Interface for reviews (connect to locations)
- Star rating system
- Basic itinerary builder (choose locations)

Sprint 5 (Week 7-8)

Custom Itineraries & Personalization

Goal: Build tailored travel plans for both registered and guest users.

Features: Itinerary Customization, Personalized based on profile

- Guest itinerary flow using sessions
- Match preferences to itinerary suggestions

Sprint 6 (Week 8-10)

Group Planning

Goal: Allow users to enter multiple sets of preferences and generate a shared itinerary.

Feature: Joint Itineraries

- Group preferences
- Merge preference logic (multiple user inputs)
- Store and display shared itineraries

Phase 3 : Demo 3

Sprint 7 (Week 10-12)

Local Expert Listings

Goal: Connect travelers to local experts.

Features: Expert directory and selection

- Expert profile interface
- Contact form or request form
- Link expert to traveler itinerary

Sprint 8 (Week 12-14)

Admin & Final Demo

Goal: Admin control panel & polish all systems.

Features: Admin database access, Final Testing & Deployment

- Build admin panel using Filament
- Code cleanup & documentation
- Final deployment setup

Prototype Status

Admin Dashboard: <http://159.203.117.187/admin>

Create/Login: <http://159.203.117.187/>

Learning Progress

- Learning a new programming language PHP
- Learning about the Laravel, Filament Framework
- Learning about the database management (migration, seeders)
- Learning about deploying to the Digital Ocean Droplet



Repository Setup Status

During Sprint 1, the team already established a Jira board and a GitHub repository. Source code management, issue tracking, and development collaboration are all done through the repository. A solid basis for iterative development has been formed through the establishment of first commits, branching strategy, and code standards.

Github Repository: <https://github.com/jandraarias/f25-Copper>

Team Website: <https://willpatpost.github.io/Itiner-Ease/team.html>

Ambitious Goal Follow-Up

The ambitious goal for Demo 1 was to deliver a skeleton application. This has been accomplished by setting up the DigitalOcean server, creating the GitHub repository, and utilizing Laravel and Filament to establish secure login and authentication. Although it is still in its early stages, this skeleton application aligns the team with the milestone objective by confirming that the deployment pipeline, workflows, and core environment are operational.

Technical Issues/Concerns/Challenges

- Reaching Knowledge Parity -
 - As a consequence of our delayed start and desire to get a working skeleton that everyone could begin working on a lot of the work was done by only a couple, and we need to focus on making sure everyone is at the same pace for Demo 2 which will involve a lot more collaboration.
- Collaboration and Integration -
 - Demo 2 involves getting the main feature of our product to a deployable state, the Itinerary Creation Interface. It involves several features that will require their own research and unique implementation that we then have to integrate together. We believe our best method forward will be to work in small teams to tackle these features.

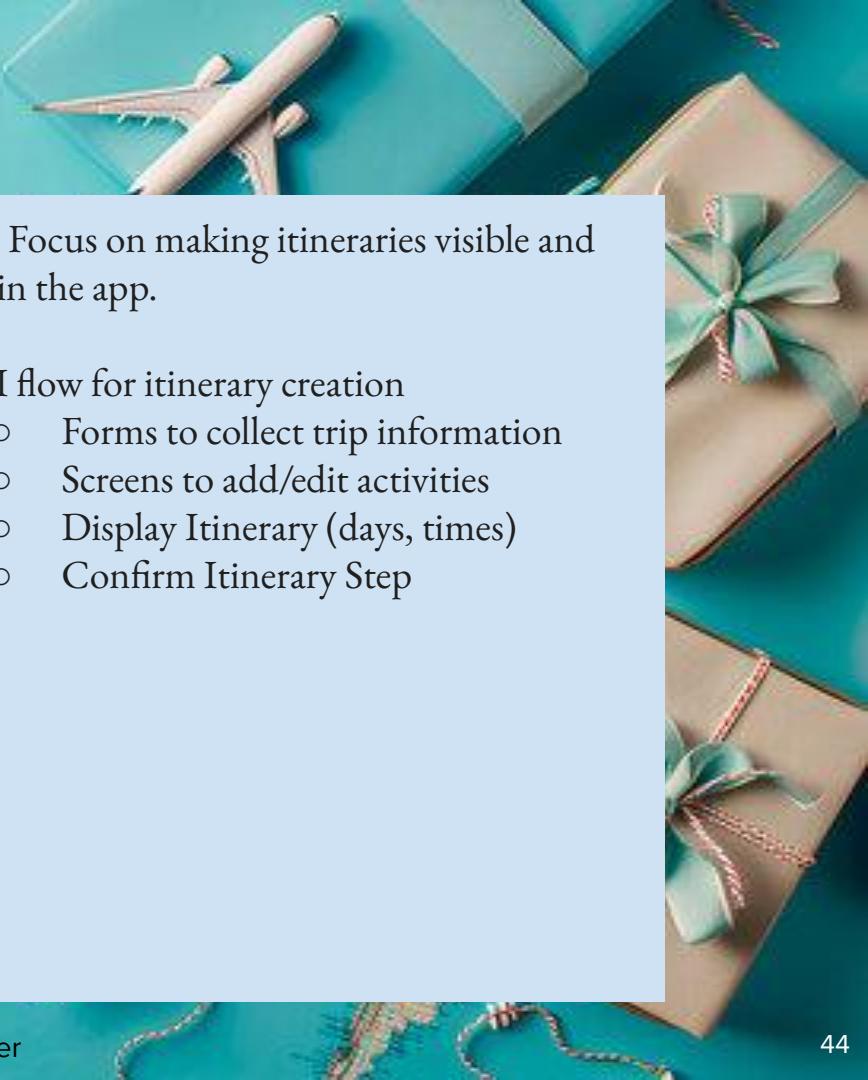
Next Steps: Itinerary Creation

Crystal - Focus on making itineraries in the database.

- Database Design
 - Itinerary (Trip Information)
 - Itinerary Activities (specific activities linked to itinerary)
 - Relationships (User, Group)
 - Add/Remove/Edit activities in itinerary

Jandra - Focus on making itineraries visible and editable in the app.

- UI flow for itinerary creation
 - Forms to collect trip information
 - Screens to add/edit activities
 - Display Itinerary (days, times)
 - Confirm Itinerary Step



Next Steps: AI Integration

Fred

- AI based Itinerary suggestions/creation
 - Use AI to make Itinerary suggestions based on user preferences and popular reviews
- AI optimization
 - Figuring out what parameters and filters to use to see what makes the most sense in regards to actual recommendations.

Stephen

- GPT-based review and location summaries
 - Use AI to summarize an overview of the location as well as the most common topics mentioned in the reviews
- OpenAI database access and integration
 - Finding a way to give OpenAI access to our dataset to then perform its other functions.



Next Steps: Reviews Integration

William M

- Develop a method to collect review data and make it easily accessible for the team
- We'll choose a smaller city that offers a variety of activities
- We'll try to find an approach on gathering and organizing review data.

Balemual

- Will find a data source in order to get those reviews
- Will also be working on finding a method to collect review data

Next Steps: Front-End

William P.

- Customize each screen for end users
 - Itiner-Ease theme
 - Global accessibility
 - Ease of use
 - Easy navigation between features



Q&A

**“Guided by Locals.
Designed for Explorers.”**

References

- [1] UNWTO, "International Tourism Recovers Pre-Pandemic Levels in 2024," *Unwto.org*, Jan. 25, 2025. <https://www.unwto.org/news/international-tourism-recovers-pre-pandemic-levels-in-2024>
- [2] WTTC, "U.S. Remains the World's Most Powerful Travel & Tourism Market," *Wttc.org*, Apr. 09, 2024. <https://wttc.org/news-article/us-remains-the-worlds-most-powerful-travel-and-tourism-market>
- [3] A. Fleck, "How Often Do Americans Travel?," *Statista Daily Data*, Feb. 17, 2025. <https://www.statista.com/chart/31152/share-of-us-respondents-who-have-taken-private-trips/>
- [4] K. Gilbert, "Do Travelers Live Longer? 5 Health Benefits of Traveling," *Gocollette.com*, Sep. 02, 2016. <https://www.gocollette.com/en/traveling-well/2016/09/do-travelers-live-longer>
- [5] M. Swanson, "This Is How Much Time Travelers Spend Researching Before Booking a Trip," *Travel Wires*, Jul. 27, 2023. <https://www.travelwires.com/this-is-how-much-time-travelers-spend-researching-before-booking-a-trip>
- [6] M. Turner, "Survey: Travelers Want to Experience Destinations as Locals, Crave More Authenticity," *Travel Agent Central*, Nov. 23, 2022. <https://www.travelagentcentral.com/your-business/survey-travelers-want-experience-destinations-locals-crave-more-authenticity>
- [7] J. Loo, "The Future of travel: New Consumer Behavior and the Technology Giving It Flight," Google, Nov. 2017. Available: https://www.thinkwithgoogle.com/_qs/documents/4687/1121-Future-of-Travel-Download.pdf
- [8] M. Blutstein, D. Quinby, and C. Eisel, "The U.S. Leisure Traveler: Understanding Consumer Lifestyle Behavior," *Phocuswright*, Sep. 13, 2017. <https://www.phocuswright.com/Free-Travel-Research/The-US-Leisure-Traveler-Understanding-Consumer-Lifestyle-Behavior>
- [9] The, "Personalized Travel and Experiences Global Market Report 2025," *Thebusinessresearchcompany.com*, Jan. 2025. <https://www.thebusinessresearchcompany.com/report/personalized-travel-and-experiences-global-market-report>
- [10] Aon, "Navigating the Storms: Weather Risks Reshaping How Americans Travel | Aon," *Aon.com*, Jan. 23, 2025. https://www.aon.com/travel_blog/blog_posts/navigating-the-storms-weather-risks-reshaping-how
- [11] Hilton, "Connectivity & Personalization | 2024 Trends Report," *stories.hilton*, 2024. <https://stories.hilton.com/2024trends-connectivity-personalization>
- [12] Polok, Lucyna. "The Benefits of Travel: 14 Things Travel Teaches You." Europe Language Jobs, Oct.31,2024. www.europelanguagejobs.com/blog/benefits-of-travel?t=1741038646146
- [13] French, Sally. "The No. 1 Reason Some People Aren't Traveling This Year." NerdWallet, 22 Feb. 2023, www.nerdwallet.com/article/travel/why-people-arent-traveling-2023#:~:text=Lack%20of%20money%3A%2027%25,,as%20I%20wanted%3A%2012%25.
- [14] The TravelPocketGuide. "Group Travel: The Benefits and Challenges of Travelling with a Group." Travel Pocket Guide, 24 Apr. 2023, www.thetravelpocketguide.com/tips/group-travel/#:~:text=Travelling%20with%20a%20group%20can,plans%20at%20the%20last%20minute.
- [15] J. Chase-Lubitz, "Guided Tours Gain Popularity Among Millennials and Gen Z," Skift, Jun. 26, 2024, <https://skift.com/2024/06/26/guided-tours-gain-popularity-among-millennials-and-gen-z/>
- [16] A. Miller, "What Makes Today's Tour Guides Successful," Travel Alliance Partnership, Jul. 24, 2024. <https://travelalliancepartnership.com/what-makes-todays-tour-guides-successful/>
- [17] The Travel Insiders, "7 Reasons to Hire a Tour Guide," The Travel Insiders, 2020 <https://www.the-travel-insiders.com/7-reasons-hiring-guide>
- [18] E. Malott, "The Pros and Cons of Guided Tours," Traveling Two Together, Nov. 30, 2018, <https://travelingtowgether.com/2018/11/30/the-pros-and-cons-of-guided-tours/>
- [19] The Jet Set Blonde(B. Ryan), "The Pros and Cons of Booking a Private Tour Guide Experience," JetsettingBlonde, Sep. 2, 2019 <https://www.jetsettingblonde.com/blog/the-pros-and-cons-of-booking-a-private-tour-guide-experience>