NTASTIC

Project Management Plan

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Abstract

This project aims to enhance the living and tourism experiences by providing recommendations, user socialisations, and AI interactions.

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Introduction

Executive Summary

NTastic utilises techniques, including Python, NextJS, NestJS, and Large Language model to deliver the product that could provide customised recommendations in terms of daily life and tourism.

Product and Services

NTastic will collect all information related to restaurants, accommodations, entertainments, and others by their categories, and recommend them based on their real-time stats. Additionally, users can also browse customised recommendation posts based on their characteristics so that they could make easy choices. Then, they could also express their thoughts or ask for recommendations by opening posts. Lastly, AI interaction will also help users to explore the great northern land based on their characteristics.

Organisation and Staffing

Currently, three roles are involved in this project to approach the implementation: (1) The project manager is responsible for planing and developing the project idea, monitoring project progress, and addressing other problems; (2) The product manager identifies the customer need, designs product features, and improves the product presentation; (3) The developer plans out the program architecture and structure, completes test cases, and finally develops a program that meets product requirements.

Key Features

1. User login and characteristics selection
   I) User login elements: username, password
   II) Characteristics: age range, gender, occupation[student, housewife, teacher, and etc.], interests[cuisine, sports, music, and etc.]
2. Official recommendation based on categories
   I) Categories: restaurants, accommodations, things to do, events, others
   II) Item number: at least 50 for each category
   III) Sorting key: review number, rating
   IV) Display features: title, cover image, location, rating, official website
   V) Data source: Google Map, Facebook for events
3. Customised recommendation
   I) For each item: at least 10 comments with photo should be collected into the database to prepare for this feature.
   II) How to recommend: 100 comments most related to the user's characteristics should be calculated by a model and displayed in the home page[clustering or recommendation].
   III) Display details: user name, comments, photos, ratings, location, comments, likes
   IV) When clicking in: their should be comments or interactions appearing under the post content.
4. Creating a post
   I) A user could create a post to share his review on a restaurant, hotel, or entertainment.
   II) Before writing, the user should select which category is related.
   III) Content details: comments, [photos], [ratings], [location]

IV) If the post is a question, the AI model should provide a comment after the post is created.

5. AI interaction
    1. A user could ask the model questions with the LLM portal
    2. The model provides answers based on the user's chracteristics

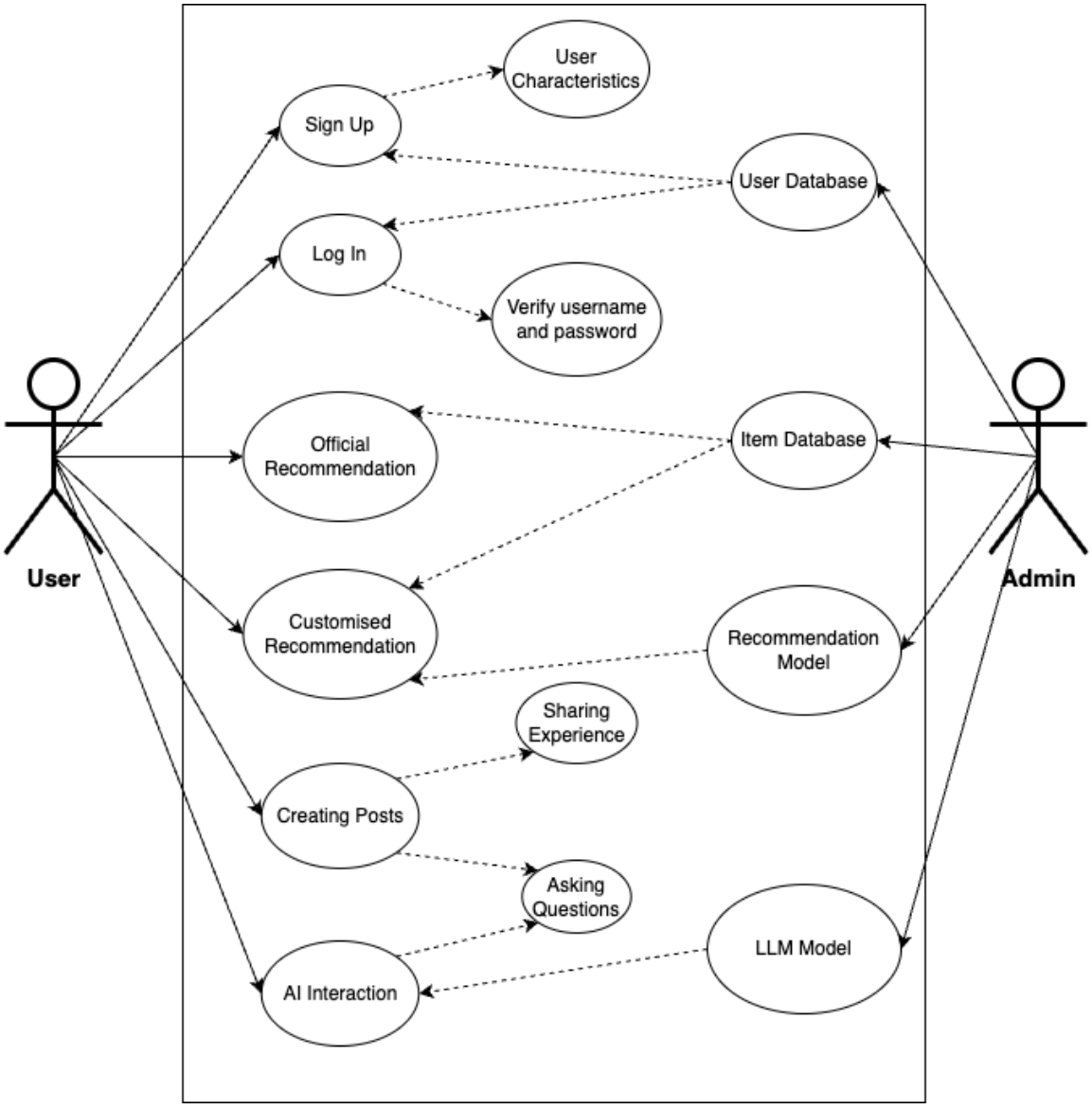
Project Deliverables

Index	Deliverable Name	Description
1. Item Management system		
1.1	Item table	This table should contain item title, cover photo address, review number, rating, location, and official website
1.2	Review table	This table should contain username, item title, review content, rating
1.3	Review photo table	This table should contain review id, photo address
2. Large Language Model		
2.1	LLM service API	With this api, the model could accept prompts from POST and return answer
3. Recommendation Model		
3.1	ML model	This should calculate 100 reviews most related to a user's characteristics and return them
4. User Management System		
4.1	Registration entry	Users could register and set up their characteristics
4.2	Log entry	Users could log into the system to use the product
4.3	User table	This table should contain users' information
	5. User Interface	
5.1	Categories	By clicking into the specific category, the user could view the official recommendation list
5.2	Customised recommendation	Customised recommendation reviews should be displayed in the home page

Index	Deliverable Name	Description
5.3	Post creation	Users could create posts to share their thoughts
5.4	AI interaction	Users could ask the AI model for recommendations based on their characteristics

Software Requirements

Product Use Case



Functional Requirements

Priority: 1-5

1-Critical, 2-High, 3-Medium, 4-Low, 5-Future

ID	Requirement	Stage	Priority	Dependencies
F001	The system should have a database containing all the necessary data	1	1	
F002	The system should have an LLM model service to support the AI interaction	1	2	
F003	The system should have a recommendation model to provide customised recommendation	1	2	F001
F004	The system shall enable users to sign up, log in, and choose their characteristics	2	1	
F005	The system should provide official recommendation based on categories	2	1	F001
F006	The system shall provide customised recommendation based on users' characteristics	2	2	F003, F004

ID	Requirement	Stage	Priority	Dependencies
F007	The system shall provide AI interactions to enable users to ask for other recommendations or questions	2	2	F002, F004
F008	The system shall enable users to create posts	3	2	
F009	The system shall enable users to interact with each other	3	3	F008
F010	The system's AI model to automatically reply to a created post	3	3	F002, F004, F008

Non-Functional Requirements

ID	Requirement	Stage	Priority	Dependencies
U001	The system shall provide a user-friendly interface	2	1	
U002	The project shall provide a presentation incase of the failure to meet key requirements	1	1	

MileStones

ID	Task Mode	Task Name	Duration	Start	Finish
1		Fetch Data From Google Ma	3 days	Wed 9/25/24	Fri 9/27/24
2		Fetch Data From FaceBook	3 days	Wed 9/25/24	Fri 9/27/24
3		LLM Model Deployment	5 days	Wed 9/25/24	Tue 10/1/24
4		Recommendation Model Deployment	5 days	Mon 9/30/24	Fri 10/4/24
5					
6		User Management	3 days	Mon 9/30/24	Wed 10/2/24
7		Official Recommendation	2 days	Mon 9/30/24	Tue 10/1/24
8		Customised Recommendati	2 days	Mon 10/7/24	Tue 10/8/24
9		AI Interaction	2 days	Wed 10/2/24	Thu 10/3/24
10		Post Creation	2 days	Wed 10/2/24	Thu 10/3/24
11		Software Testing	5 days	Wed 10/9/24	Tue 10/15/24
12					
13		Project Presentation	20 days	Wed 9/25/24	Tue 10/22/24