



PARSHWANATH CHARITABLE TRUST'S
A.P. SHAH INSTITUTE OF TECHNOLOGY
Department of Computer Science and Engineering
Data Science



MAJOR PROJECT 1

(Topic selection)

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Name	Student ID
Krish Jaswal	211070
Varad Joshi	21107002
Khushi Kadam	211070
Shravani Kulkarni	211070

Computer Science and Engineering
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Topic 1: AI Travel Itinerary

Objectives:

- To use a RAG based system to create customized travel itineraries
- To use Maps API to find nearby places of interest
- To create an extensive dataset of local travel conditions and pricing
- To generate truly unique itineraries based on specific requirements of a user in a natural, conversational flow
- To integrate with popular travel blogs to provide recommendations for local places to visit etc
- To create an itinerary based on user needs such as scenario, number of people travelling, per head budget, theme of the tour etc

Outcomes:

- A chatbot, utilizing a tiny chatbot such as Phi-3 or Gemma with Trip Advisor Dataset
- Ability to save and share itineraries over a blockchain powered decentralized database
- API integration for real time prices of hotels, travel, food etc
- Custom itineraries for scenarios such as solo backpacking, family trips, religious tours, romantic vacations etc
- Achieving a high level of customizability by having personal preferences and budgets easily changed multiple times in a natural way

Topic 2: Local Community EMS

Objectives:

- To use Flutter as frontend framework because of its multiplatform availability and web assembly targets
- To have a Fine tuned LLM for captions and post contents
- To use a Blockchain based ticket system integration and decentralized database
- To use OAUTH 2.0 for authentication with multiple social platforms
- To utilize Stripe Payment gateway integration for paid events
- To target Event managers and make it easier for them to discover venues and contact venue owners

Outcomes:

- An app to unify communities, their events and their social media.
- Gamified rewards and experience system for members
- NFT based event ticket generation
- AI writing assistant to write posts contents based on images (like usually done on LinkedIn by many users)
- Venue discovery and ticket management built into a accessible web interface for Event managers
- A p2p messaging system for event managers and venue managers using XMPP

Topic 3: Expense Tracker with smart insights and parental controls

Objectives:

- To mine expenses locally by using Device Notifications or SMS and skip manually inputting digital payments
- to make tracking expenses easier using Smart Assistant integrations (alexa/google assistant/Siri)
- To have advanced analytics and smart suggestions to incorporate healthier financial habits
- To have a trend analyser algorithm to predict in which months expenses are more likely to be higher
- To have built in net assets and liabilities tracking

Outcomes:

- A expense tracking application that people will actually use
- Smart suggestions and notifications via Voice assistants to provide important reminders regarding spending limits, upcoming bills etc
- Completely localized processing of data by using tensorflow lite models
- A chatbot which can provide helpful suggestions to the user based on their spending habits (anonymized data sharing to the backend)
- Parental controls for tracking pocket money expenses

Topic 4: AR powered Gym App

Objectives:

- To use image recognition models for providing workout recommendations based on gym equipment
- To integrate a LLM model which can be used for asking doubts or other recommendations
- To smartly create meal plans and gym routines based on user requirements by utilizing a RAG
- To connect the RAG with popular workout blogs for improved contexts
- To use a decentralized secure database for sharing created workout and meal plans
- To have built in workout videos for beginners
- To use stripe payment gateway

Outcomes:

- An app for beginners to be able to simply capture any gym equipment and immediately get all the workouts that can be done
- Functionality to create, share and track workouts
- Diet plans and meal plans custom tailored for each user with an RAG
- Social space to connect and talk with like minded gym freaks
- Ability to connect with dieticians and gym trainers for more reliable meal plans and workouts
- All in one application for beginners to get started in a gym

Thank You