



# TrailQuest

## Group 11 - Project Proposal

A gamified hiking companion app that transforms  
the world's hiking trails into an engaging collection adventure.

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# Proposed App Idea for Prototype

TrailQuest is an unique gamified hiking companion app that transforms the world's hiking trails into an engaging collection. Beside offering comprehensive hiking guides and gear tips, TrailQuest differentiates itself from traditional hiking apps by motivating hikers through a rewarding system with challenges, achievements, and leaderboards. Hikers can also share real-time trail updates, plan group hikes, and connect with companions, fostering a strong hiking community and creating interactive memories along the trails.

## Background Research

### Competitors

#### AllTrails:

- Market leader in hiking apps.
- **Strengths:** Comprehensive trail database, detailed reviews, and GPS tracking.
- **Gaps:** Lacks gamification features, interactive challenges, and strong local community engagement.

#### Strava

- Popular fitness tracking platform.
- **Strengths:** Advanced tracking and performance analytics.
- **Gaps:** Not hiking-specific, more focused on running and cycling. Lacks hiking challenges and community features.

### Inspirations

#### Duolingo

Excels at gamification in learning, making education engaging and habit-forming. Key Features:

- **Streak System:** Encourages users to hike consistently by tracking daily or weekly hikes.
- **Personalized Readiness Indicator:** Can inspire difficulty-based trail recommendations based on user progress.
- **Interactive Progression:** A model for motivating hikers with levels, achievements, and milestone rewards.

#### Geocaching

A global treasure-hunting app where users find hidden objects using GPS, turning outdoor activities into interactive quests. Key Features:

- **Exploration Challenges:** Encourages users to explore new locations through gamified missions.

- **Community-Driven Content:** Users contribute hints, logs, and discoveries, similar to TrailQuest's real-time trail updates.
- **Achievement-Based System:** Rewards users with badges for reaching different milestones, enhancing motivation.

# PACT Framework

## People

- **Hikers & nature lovers** seeking adventure and exploration with engaging experience.
- **Outdoor enthusiasts** who want to connect with like-minded individuals.
- **Everyone** interested in hiking safety, best practices and preparation.

## Activities

- **Earning virtual rewards** through challenges, achievements, and leaderboards.
- **Sharing experiences** through trail updates, photos, and community discussions.
- **Navigating, tracking, & logging** through real-time guidance and post-hike records
- **Learning about hiking** through interactive guides, safety tips, and recommendations.
- **Discovering new trails** via real-time recommendations based on collected data.

## Contexts

- **Where:** Everywhere, both indoor (planning) and outdoor, at home or on trail.
- **When:** Before the hike (research and preparation); during the hike (real-time navigation and tracking); after the hike (logging and sharing experiences).

## Technologies

- **GPS-based navigation & tracking** for real-time route guidance and progress monitoring.
- **Cloud-based data storage** for user profiles, achievements, and shared trail updates.
- **Social Network API** for community discussions, media sharing, and group coordination.
- **Offline caching system** to enable access to maps, trail data, and logs in remote areas

# Value Proposition

If you are seeking for interactive adventures, nature explorations or to connect with like-minded outdoor enthusiasts, or just to learn more about hiking, TrailQuest app is for you. Reward yourself by taking challenges, collecting achievements, or recording unforgettable hiking moments by sharing recorded videos of trails, sharing updates, and connecting with an engaging community. Whether you are planning at home or hiking on the trail, the app supports every step of your

journey with the integration of real-time navigation, offline access, and seamless data syncing, ensuring a smooth and reliable hiking experience at any where, any time.

# Project Contract

**Weekly Meeting:** Thursday during the class break and Sunday afternoon via Zoom

**Meeting Format:** Review completed tasks, discuss blockers, and revise tasks as needed

**Communication:** Whatsapp for daily updates, email for formal discussions

**Workflow:** Tasks are assigned and tracked through the schedule tab in the group's Google Doc

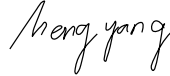
**Contributions:** spend at least 4 hours/week to finish assigned tasks and reports

*We, the undersigned, agree to the above terms and commit to our responsibilities.*

**Tim Nguyen**



**Mengyang**



**Suo Hao**



## Work Logs

### Tim Nguyen

Date	Number of Hours	Description of Work Done
Jan 31, 2025	2	Initialize proposal repository, documents and notify the team.
Feb 02, 2025	4	Refine and finish proposal document.
Feb 04, 2025	0.5	Finalize and submit the proposal

### Mengyang

Date	Number of Hours	Description of Work Done
Feb 1, 2025	2	Write the proposal details. Discuss with the team.
Feb 4, 2025	0.5	Discuss with the team and refine the final proposal.

### Suo Hao

Date	Number of Hours	Description of Work Done
Feb 1, 2025	2	Writing the value proposition based on the app research.