Tasteful Panthers: Recommendations at the Dining Hall

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Project Overview

- Mobile app for dining hall meal recommendations
- Personalization recommendations based on user preferences & reviews
- Features: reviews, GPS notifications, contests
- Two user types: Students and Kitchen Staff
- Real-time updates and interactions

User Types & Features

Students

- Submit and search reviews
- Receive personalized recommendations
- Participate in contests
- Suggest future meals

Kitchen Staff

- Search reviews by tags and ratings
- Comment on student reviews
- View analytics:
  - Top rated meals
  - Lowest rated meals (1-2 stars)
  - Student suggestions

Functional Requirement: Personalized Recommendations

Input sources:

1. User account preferences/tags
2. User past reviews

New users:

- Recommendations based on flavor profile only
- Suggests top-rated meals matching preferences

Existing users:

- Matches with similar user profiles
- Example:
    - User A likes meals 1 & 2
    - User B likes meals 1, 2 & 3
    - System recommends meal 3 to User A

Functional Requirement: Review System

User Capabilities:

1. Enter Reviews:
    - 1-5 star rating
    - Text (100 char max)
    - Images/Videos (external links)
    - Tags (health, diet, etc.)
2. Search Reviews:
    - By specific tags
    - By star rating
    - By text keywords
3. View Reviews:
    - For recommended meals
    - From leaderboard items

Staff Capabilities:

1. Search Reviews:
    - By specific tags
    - By star rating
    - By text keywords
2. View Reviews:
    - From search page
    - From leaderboard items
3. Comment on Reviews
    - Comment on student reviews
    - Students cannot respond

Functional Requirement: GPS Notification System

Implementation:

- Triggers within 100 feet of dining hall
- Two notification types:
    1. Entry: Shows daily recommendation
    2. Mid-meal: Prompts for review

Design Considerations:

- Uses timestamps for entry/exit
- Calculates meal duration
- Ensures timely review requests

Functional Requirement: Contests & Leaderboards

Four Leaderboard Types:

1. Forecast accuracy ranking
2. Judged reviews ranking
3. Meal suggestions by votes
4. Daily dish ratings

Contest Features:

- Weekly themes based on tags
- Judged by random users
- Top reviewers receive rewards

Functional Requirements: Meal Suggestions

Student Features:

- Submit meal ideas for next week
- Required fields:
    1. Dish name
    2. Reasoning
    3. Optional recipe link
    4. Number of votes

Staff Features:

- View popular suggestions
- Implement chosen meals
- Announce when suggestions become reality

Functional Requirements: Student Home Screen

"What's tasty today?":

1. Recommended by tasteful twin
    - Explanation of match
    - Link to dish reviews
2. My favorite meals
    - Highest rated past meals
3. Crowd favorites
    - Today's highest-rated dishes
4. Meal suggestions become reality
    - Staff-implemented student ideas

Rankings:

- Personal forecast rank
- Personal review rank

Functional Requirements: Staff Home Screen

Key Features:

1. Student Reviews Button
    - Search by tags
    - Filter by star rating
    - Comment on reviews
2. Meal Analysis
    - Top rated meals
    - Lowest rated meals (1-2 stars)
3. Analytics Button
    - Access to leaderboards
    - View suggested meals

Key Modules:

1. Mobile Application
    - User Interface
    - Location Services
    - APIClient
2. Backend Server
    - APILayer
    - Logic
    - DatabaseManager
3. Data Models
    - User
    - Review
    - Meal
    - Contest

Database Design

1. Users
    - Email (@fit.edu)
    - Flavor profile
    - Review history
2. Reviews
    - Rating
    - Content (text/media)
    - Tags
3. Meals
    - Info
    - Availability
    - Recommendation score

Current Progress & Next Steps

Completed:

- Requirements documentation
- System design
- Test planning
- Selected tools
- Hello world demos
- Select collaboration tools

Next Milestone:

1. Implement review system
2. Enable search functionality
3. Develop staff interfaces

Testing Focus:

- User interface usability
- GPS accuracy
- Review system functionality

Questions?

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