

Implementation plan

AI-Powered Meal Recognition Recipe Assistant



Presented By: Leyan Buirat

Overview

Project Vision:

To develop an intelligent mobile application that seamlessly bridges the gap between food discovery and meal preparation using cutting-edge AI and computer vision.

Core Mission:

Empower users to identify meals through image recognition and receive personalized, culturally-aware recipe suggestions—making cooking more accessible, enjoyable, and informed.



Overview

Scope Includes:

- Image-based meal recognition
- Personalized recipe generation
- Nutritional and allergen analysis
- Support for Arabic and international cuisines
- Cross-platform mobile deployment using Flutter

Approach:

Leverage Azure Custom Vision, Spoonacular API, and a modular full-stack architecture to deliver a scalable, user-friendly, and intelligent food assistant.



Campaign Goals

MealLense is an AI-powered meal recognition and recipe assistant designed to simplify cooking and promote healthier eating habits through intelligent technology.



Schedule & Deadlines

Lay out the timeline for the development activities and milestones that will make the project successful.

01 Set up development environment and tools.

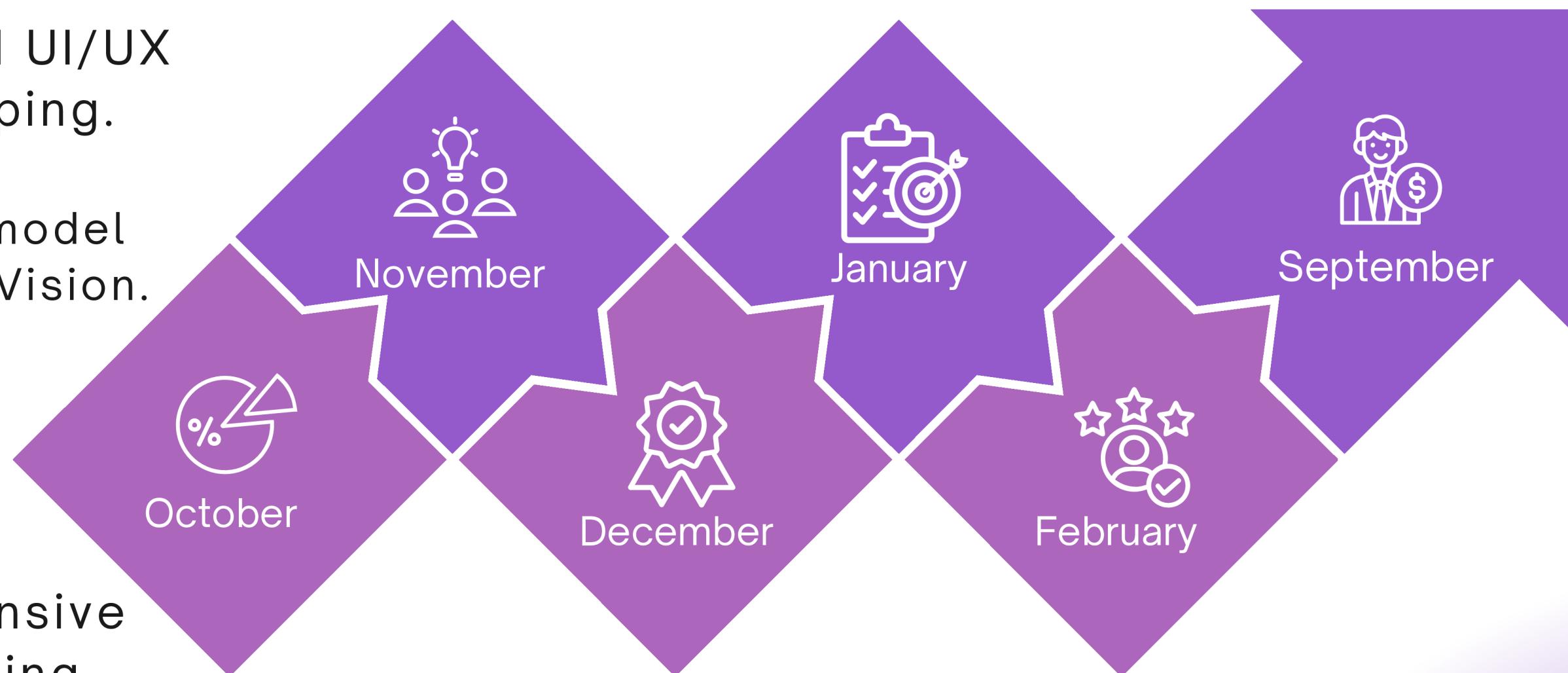
02 Complete frontend UI/UX design and prototyping.

03 Train and deploy AI model using Azure Custom Vision.

04 Integrate Spoonacular API and backend services.

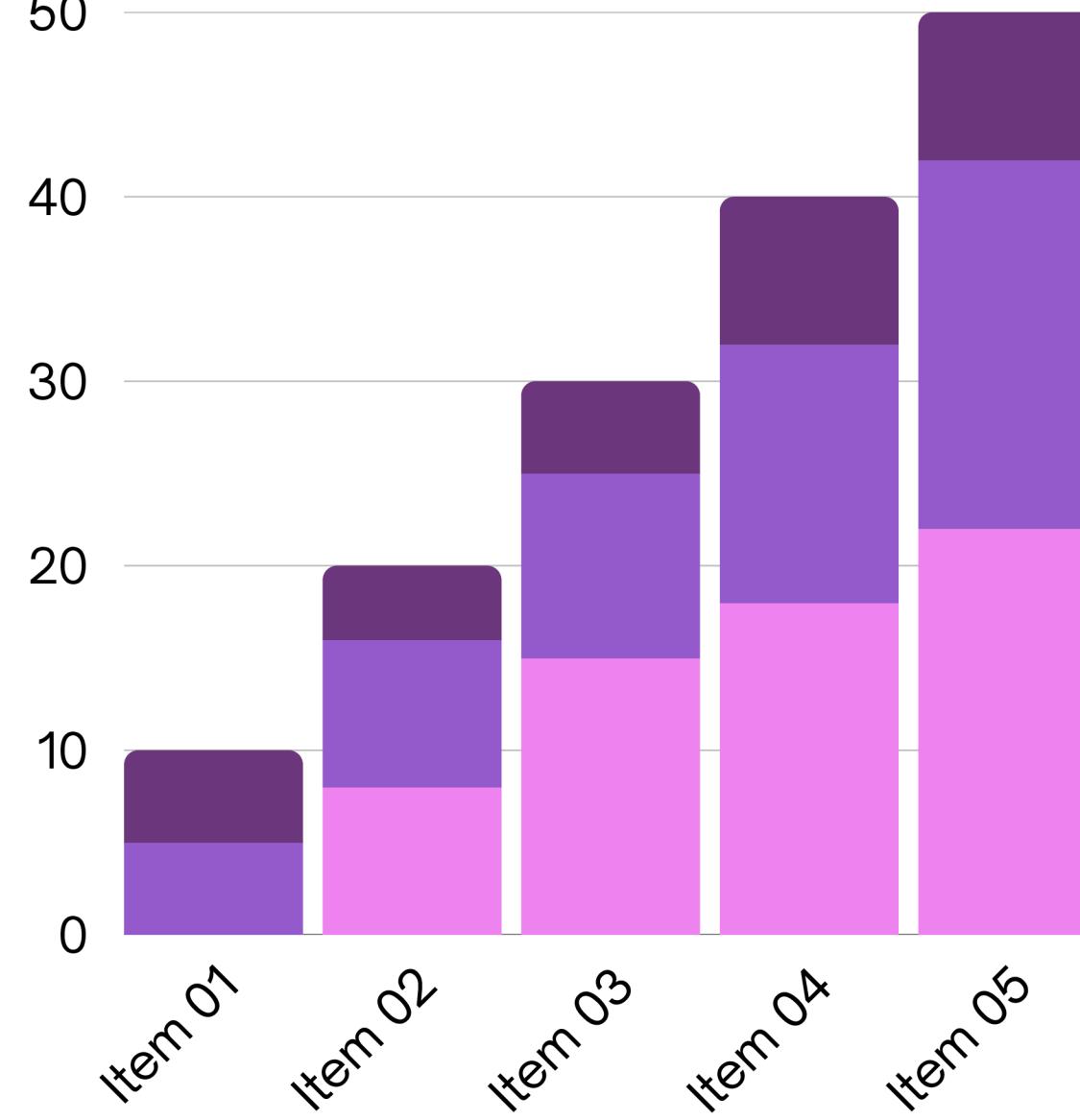
05 Conduct comprehensive testing and debugging.

06 Final deployment and project documentation.



Budget

Use the graph to present the expenses associated with the project.



Costs and Expenses:

- **Azure AI & Cloud Services**
- Custom Vision, App Service, and Blob storage DB for model training and deployment.
- **Spoonacular API Subscription**
- Access to recipe data and nutritional information.
- **Development Tools & Software**
- Flutter SDK, Visual Studio Code, and design tools like Figma.
- **Testing Devices & Resources**
- Mobile devices for cross-platform testing and dataset acquisition.
- **Documentation & Presentation**
- Report printing, presentation materials, and demo preparation.
-



Project Timeline

For scheduling
tasks and tracking
progress

Tasks	17 oct 2025	1 nov 2025	7 nov 2025	14 nov 2025	21 nov 2025	28 nov 2025	5 dic 2025	12 dic 2025
Learning Flutter								
Develop full stack log up								
Develop full stack log in								
Develop full stack sign/log out								
Develop full stack continue as guest								
Develop full stack take-retake-upload and crop photo								
Develop full stack delete account								
Develop full stack user profile								
Add dishes on Azure custom vision								
Integrate the Azure custom vision backend with the UI								
Integrate spoonacular API with backend service								
Develop full stack AI assistant								
Training on Azure								

Project Timeline

For scheduling tasks and tracking progress

Tasks

19 dic 2025

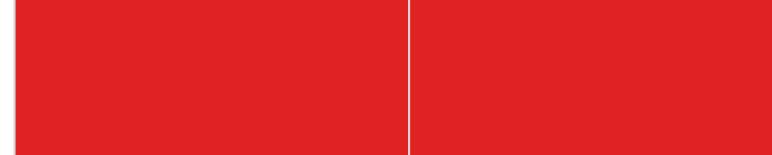
26 dic 2025

3 ene 2026

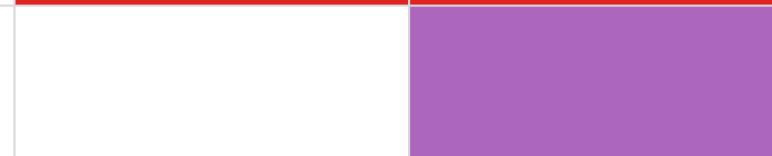
10 ene 2026

17 ene 2026

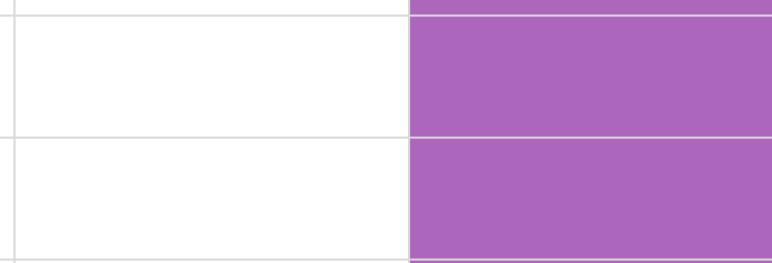
Clean spoonacular json file and display results in UI



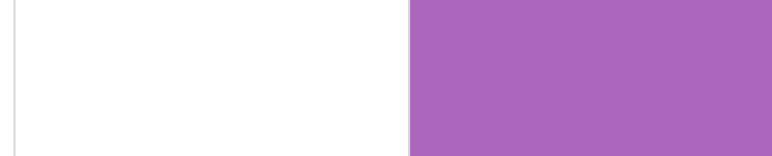
Develop full stack Save recipe using azure blob storage



Develop full stack history using azure blob



Develop full stack text-to-speech



Develop full stack user feedback using azure blob storage



use Azure Blob storage



Testing process for whole application





Project Team

Instructor

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