

AI Todo App - Product Requirements Document (PRD)

1. Executive Summary

Project Overview

The AI Todo App is an intelligent, multilingual task manager. It combines standard todo operations with a smart translation feature using a predefined translation dictionary for common tasks and GPT-based fallback translation via the OpenAI API. This hybrid model boosts performance, reduces API cost, and showcases effective AI integration.

Key Objectives

- Functional todo app with CRUD operations
- AI translation: predefined phrases + GPT fallback
- Deploy on Vercel with secure environment variable support
- Full code and user documentation in GitHub
- Showcase AI-assisted software development

2. Product Vision & Goals

To create an intelligent, multilingual productivity app with streamlined translation using both dictionary and GPT-based logic.

Primary Goals

- Complete todo task lifecycle
- Fast and cost-efficient AI translation system
- Demonstrate best practices in AI-integration
- Provide clear documentation and deployment pipeline

4. Functional Requirements

4.1 Todo Features

- Add, complete, and delete tasks
- View and filter tasks by priority or status

4.2 AI Translation System

- Language selection dropdown
- Translate button for each task
- First checks predefined translation dictionary
- If no match, sends prompt to GPT (via OpenAI API)
- Translated result is cached in session for reuse

5. Technical Requirements

- Streamlit frontend (single Python file)
- Python 3.8+, OpenAI SDK, dotenv
- Predefined translation dictionary for 5 languages
- GPT-4 fallback model (gpt-4o-mini-2024-07-18)
- Environment variable handling for API key
- Vercel-compatible deployment (vercel.json config)

6. Deployment & Environment

- GitHub repository with full code and README
- OpenAI API key added in Vercel env variables
- Single-click deployment supported on Vercel
- API response error handling built-in

7. Future Enhancements

- Persistent database (SQLite/Firebase)
- User login and multi-user task lists
- Due dates, notifications, and smart suggestions
- Export as CSV/Excel, or connect to Google Calendar

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Status: ✓ Updated for Predefined + GPT Hybrid Translation Logic