PHASE 3: PROJECT DESIGN

After defining the technical and functional requirements, the next step is to focus on the visual and logical design of the system. This phase involves creating a blueprint for both the system architecture and the user interaction flow, ensuring that the application is not only efficient but also user-friendly.

Objective

To design a clear and functional system architecture and user experience that supports seamless interaction with the AI model and ensures smooth operation across devices.

System Architecture

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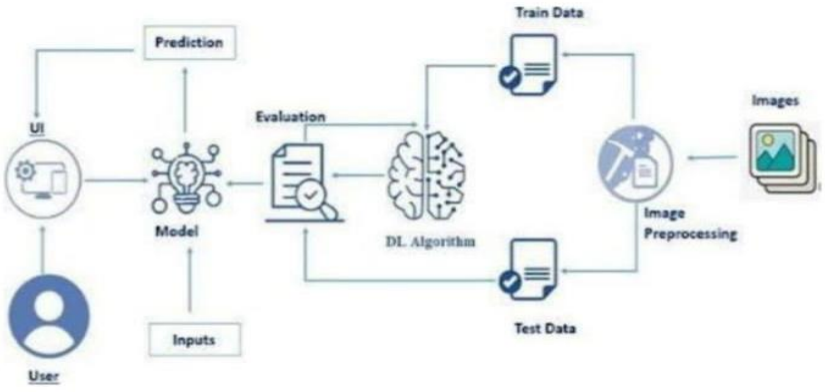

The logical flow of the system can be described as follows:

Input (Camera/Image Upload) → Preprocessing → Image Classification (CNN Model) → UI Result Display

- Input Module: Captures or uploads an image of the fruit or vegetable
- Preprocessing Module: Resizes and normalizes the image
- Classification Module: Uses a trained CNN model like MobileNetV2 to analyze the image
- Output Display: Shows the result through the user interface

User Flow

1. The user uploads or captures an image using a camera

2. The image is preprocessed and sent to the AI model

3. The model outputs Fresh or Rotten result on the UI

🔷 UI/UX Considerations

- • A clean and intuitive interface for non-technical users
- • Responsive design for both mobile and desktop
- • Clear visual indicators:
    - ✓ Green check mark for Fresh
    - ✗ Red cross for Rotten

This phase ensures that both the system's logic and its presentation are aligned to offer an accurate, fast, and user-friendly experience. It bridges the gap between the backend AI processing and the end-user, making the technology accessible and impactful.