



East West University

Group Project

Project Proposal

Smart Agriculture Information System (SAIS)

Course Code: CSE347

Course Title: Information System Analysis and Design

Semester: Summer 2025

Instructor:

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Objective of the Project

The objective of the project is to develop a system that **helps farmers manage crops, track agricultural activities, monitor environmental conditions, and receive actionable alerts**. The system will provide a simple, digital platform for farmers to input data, access advice, and improve decision-making in farming operations.

Rationale of the Project

In rural areas, farmers often rely on experience or verbal advice, lacking access to timely data and organized record-keeping. This leads to inefficient crop management and lower yields. The proposed system addresses this gap by providing a centralized, user-friendly platform that empowers farmers with essential tools and information. It also aligns with national goals of digital agriculture and food security.

Stakeholders

- **Farmers** – Main users who input crop and field data.
- **Agricultural Officers** – Advisors who monitor and guide practices.
- **System Administrators** – Manage the platform and data security.
- **NGOs & Government Agencies** – May use the system for monitoring and training.
- **Local Communities** – Indirectly benefit from improved food productivity.

Requirement Collection

Requirements will be gathered through:

- **Interviews with Farmers** – To understand real-world needs and literacy levels.
- **Consultation with Agricultural Experts** – For technical input on soil, weather, and crop management.
- **Surveys and Feedback Forms** – To validate features like alerts, language preference, and mobile usability.
- **Observation of Existing Practices** – To identify pain points in current paper-based or manual systems.

Economics benefits of the Project

- Increases **agricultural productivity** by helping farmers make data-driven decisions.
- Reduces **crop losses** by issuing early pest/disease alerts.
- Supports **government and NGO monitoring**, improving policy planning.
- Promotes **digital inclusion** and rural development.
- Enables long-term **data collection** for future analytics and AI integration.

Technology Used for Development

- **Frontend:** HTML, CSS, JavaScript, Bootstrap (for responsive UI)
- **Backend:** PHP or Java (to handle logic and database)
- **Database:** Oracle, MYSQL (for data storage)
- **Hosting:** XAMPP/Localhost (demo), optionally deployable online
- **Optional:** Google Charts for visual analytics, OpenWeather API for dummy weather data