

**INSTITUT D'ENSEIGNEMENT SUPÉRIEUR
DE RUHENGERI**

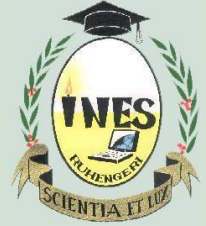
FACULTY OF APPLIED FUNDAMENTAL SCIENCES

DEPARTMENT OF COMPUTER SCIENCE

OPTION OF SOFTWARE ENGINEERING

ARTIFICIAL INTELIGENCE

GROUP 4 ASSIGNMENT



Scientia et Lux

Year III SWE Group B

Members

IRUTABYOSE Yoramu	23/22764
MASONGA SHEMA Prince	23/20861
ISHIMWE Kevin	23/22823
IZABAYO HARANIRA Jean Luc Severin	23/22493
ISHIMWE HABYARIMANA Regis	23/19890
ISHIMWE HITAYEZU Herve	23/22202

Musanze, November 2024

B.P. 155
Ruhengeri
Rwanda

T : +250 788 90 30 30
: +250 788 90 30 32
W : www.ines.ac.rw
E : inesruhengeri@yahoo.fr

Day 3 Report:

Group #4

Final Development, Testing & Deployment

1. Final Development

- **Full Rule Implementation:**
 - Added additional rules to enhance the accuracy of crop recommendations.
 - Optimized rule-based logic for better performance.
 - Integrated error handling to prevent invalid inputs.

2. System Testing & Documentation

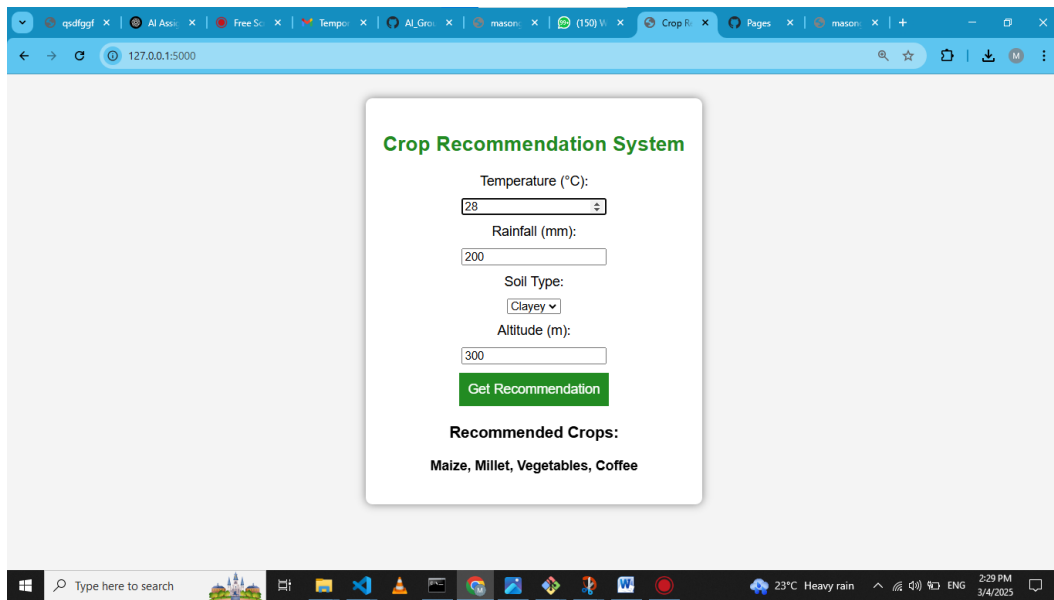
- **Testing Scenarios:**
 - Verified correct crop recommendations for different climate inputs.
 - Tested system stability under various user interactions.
 - Ensured smooth user experience on Binder deployment.

Screenshots:

The screenshot shows a web browser window displaying the 'Crop Recommendation System' interface. The browser's address bar shows the URL '127.0.0.1:5000'. The application form includes the following fields and controls:

- Temperature (°C):** A text input field containing the value '30'.
- Rainfall (mm):** A text input field containing the value '180'.
- Soil Type:** A dropdown menu with 'Loamy' selected.
- Altitude (m):** A text input field containing the value '2100'.
- Get Recommendation:** A green button.
- Recommended Crops:** A section header followed by the text 'Maize, Millet, Vegetables, Coffee'.

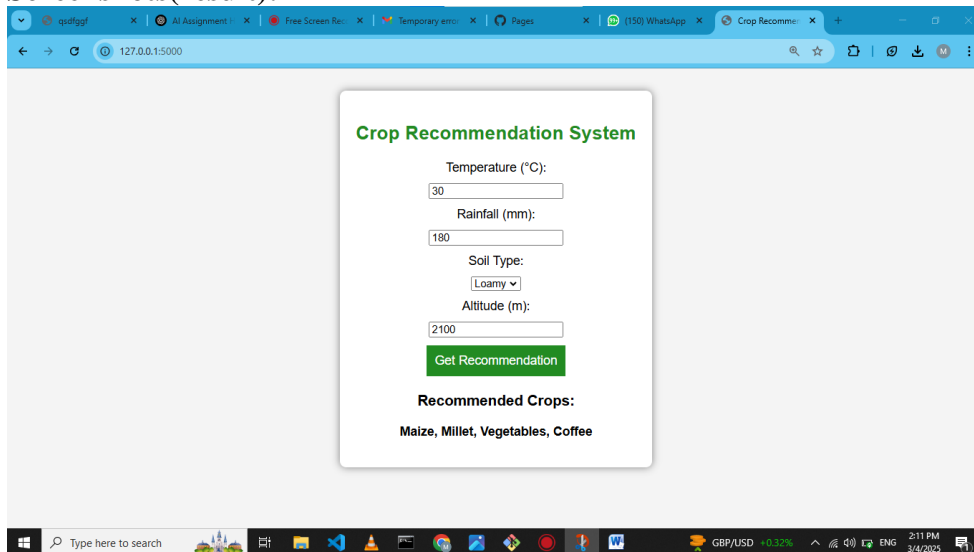
The Windows taskbar at the bottom shows the system time as 2:11 PM on 3/4/2025, along with various system icons and a search bar.



3. User Manual

- **How to Use the System:**
 - Open the web application using the GitHub Pages link.
 - Enter temperature, rainfall, soil type, and altitude.
 - Click 'Get Recommendation' to receive suggested crops.
 - Review the results displayed on the screen.

Screenshots(result):



4. Deliverables

- **GitHub Pages Link:** (https://masonga-dev.github.io/AI_Group4_ExpertSystem_Assignment2/)
- **PDF Report:** *(This document, including all sections with screenshots added)*

5. Conclusion

- The expert system for agricultural crop recommendation is fully developed.
- The system has been successfully tested and deployed.

GitHub & Deployment Links:

- **GitHub Repository:** [Masonga-Dev/AI_Group4_ExpertSystem_Assignment2](https://github.com/Masonga-Dev/AI_Group4_ExpertSystem_Assignment2)
- **Binder Web App:** [Launch App](#)
- **GitHub Pages:** https://masonga-dev.github.io/AI_Group4_ExpertSystem_Assignment2/