Crop Right

Advanced Programming End Semester Project

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BESE-4A

Problem Statement

In our economy, agriculture sector plays a very dominant role by contributing to the GDP of country. In Pakistan, the contribution of agriculture to GDP is about 24%. It means that despite all the structural changes in economy, the share of agriculture is still at the top. So, the main motivation was to improve agricultural system in the country and help our country to prosper and overcome economic dilemmas that it is suffering from. Farming has been the backbone of our country since its inception but it has not advanced much from before. The field has been completely left out from the tech revolution and has not benefitted from it at all. The greatest problem faced by the farmers is the destruction of crops at the hands of the unpredictable weather as well as planting the wrong crops in the wrong weather.

The Crop Right Solution

To solve above mentioned problem we come up with an idea of a system that will make user aware of the upcoming weather conditions and will also compare temperature, vapor and air pressure required for proper growth of selected plant or crop with the temperature and other conditions of the coming days. It will provide the user with necessary steps to prevent the damage to crops and for their efficient growth.

Crop Right shows the crop info selected by the user. This information is extracted from a text file in which it has already been stored. This data is read from the text file using scanner class. Data is also retrieved from the database using SQL queries.

The system also shows the weather forecast for 10 days. Data is retrieved from the websites by web scraping. The program connects to the website, www.intellicast.com, which provides the weather forecast for the next 10 days. The system downloads the html code of this website including all the forecast corresponding to each date. The data is extracted from the html code using HTML parser. The parser removes all of the tags in html code and extracts the text in them. Then, the required data is stored in a separate class for dates that contains attributes for each date. Analysis, which shows optimal dates for plantation of seeds and application of pesticides is then done on the basis of precipitation probability and wind speed, which are achieved after forecast of a region has been obtained.

Technologies Used

- JAVA as a main language (backend , frontend)
- MySQL for database development
- Eclipse as an IDE for java
- SQL server
- SQL workbench

Task Division

Rana Awais

- Data Gathering
- UI Designing
- Application Flow Control

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- Web Scraping
- Extracting Required data
- Comparing results to analyze conditions

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- Database Development
- Database Connection
- Extracting info from database

Conclusion

We have made a new system that can help farmers to decide which crops to plant and when. We give them updates about the weather from trusted weather agencies and help safeguard their interests better. The application, if launched in the market, will be quite helpful for the farmers.