**Intelligent Crop Planning and Management using ML**

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CSIS 4495: Applied Research Project

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**Work Log**

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| --- | --- | --- |
| **Date** | **Description of work done** | **Number of hours** |
| February 3, 2025 | Found a new dataset for weekly recommendations, cleaned the dataset, and added more data to it. | 2 |
| February 4, 2025 | Run ML model for recommending crop | 2 |
| February 6, 2025 | Fetch soil data using Selenium from a website because the API I was planning to use does not cover the entire world | 2.5 |
| February 7, 2025 | Worked on designing the home page | 1.5 |

This week, I focused on running machine learning models for crop recommendation and extracting soil temperature and moisture data using Selenium. I successfully trained a Random Forest classifier using a dataset. I also found another dataset for weekly recommendations.

Previously, I was planning to use Agro API but it only covered Europe and United States. Therefore, I implemented Selenium to scrape soil temperature and moisture data from a different website (https://soiltemperature.app). While doing this, I encountered challenges in identifying the correct HTML elements due to multiple HTML elements sharing the same class name (`col`). This data was needed for implementing weekly notifications regarding what the user needs to do with the crops they are growing. Additionally, I struggled with CSS and HTML and because of that the front-end is not ready yet.