POLITECNICO
MILANO 1863

DREAM

Data-driven Predictive Farming in Telengana

RASD

Requirement Analysis and Specification Document

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1. Introduction

1.1. Purpose

One of the most important sectors in each countries' economy is agriculture. Thus, the governments should keep it alive. On the other hand, many issues such as global warming, population increase and COVID-19 pandemic may have negative impacts on this vital sector. Scientists have predicted a significant loss in food supply by the end of century.

It was like a warning to the Telengna's government to come up with the idea of "DREAM". This idea is about designing and implementing a system which can prevent the mentioned disaster with the help of stakeholders, policy makers, farmers, market analysts, agronomists and even normal citizens.

First, in order to achieve the goals of the system, some specific data about Telengna's state have been collected. For example, meteorological forecasts, humidity of the soil, amount of water which use for irrigation, type of products and amount of products which produced by farmers. Then, with respect to this data, the DREAM system should allow policy makers to identify farmers with good performance and poor performance. Also the system should allow farmers to access to collected data and use them to improve their performance. The farmers should be allowed to share their problems with others and request for help.

This document focuses on ***Requirements Analysis and Specification Document (RASD)*** of the system and describes the main goals, the domain assumptions, the scenarios which may happen, the uses cases, the list of functional and non-functional requirements which system should fulfill and finally the diagrams to visualize the interactions between components and performance of the system.

1.1.1. Goals

Goals	Description
G1	Allow policy makers to identify farmers who are performing well.
G2	Allow policy makers to identify farmers who need help.
G3	Allow policy makers to see the result of the steering initiatives.
G4	Allow farmers to see weather forecast.
G5	Allow farmers to see humidity of soil.
G6	Allow farmers to see suggestions relating to specific crop to plan or specific fertilizer to use.
G7	Allow farmers to insert their type of products and produced amount per product.
G8	Allow farmers to insert their problems.
G9	Allow farmers to request for help and suggestion.
G10	Allow farmers to create discussion forums.

1.2. Scope