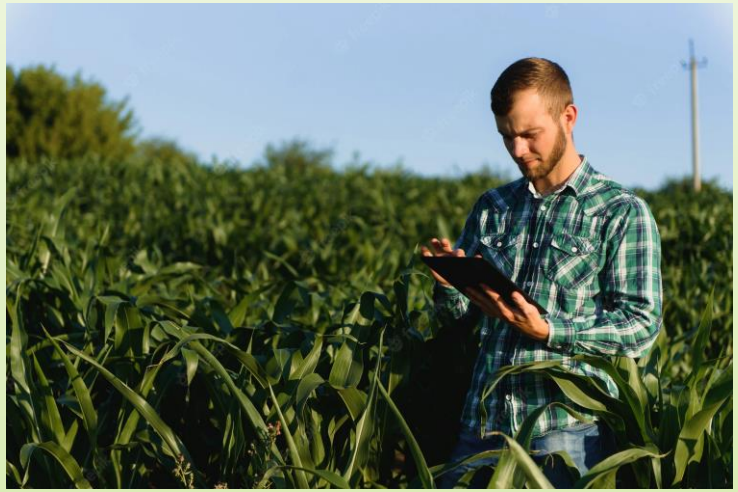
D. Y. PATIL COLLEGE OF ENGINEERING, AKURDI

BE-PROJECT

Crop Yield Prediction



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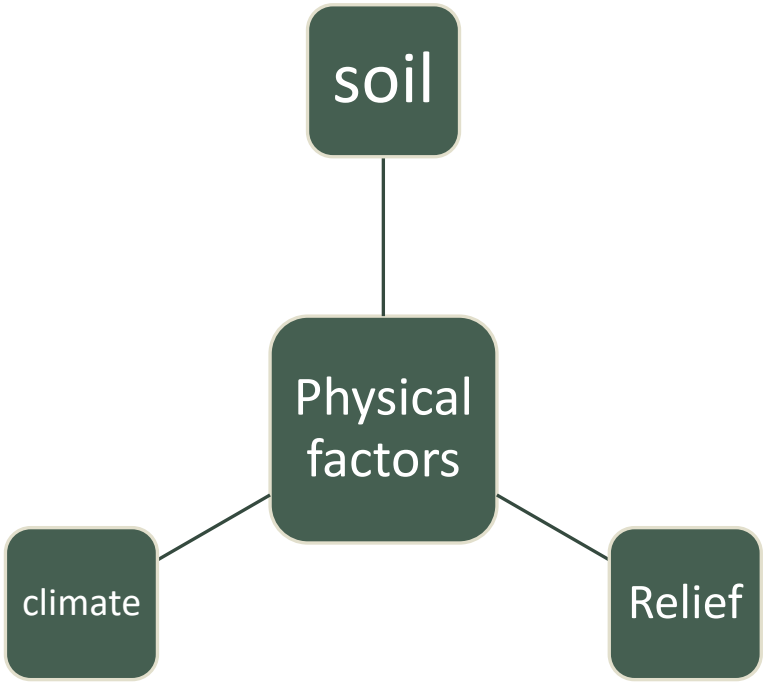
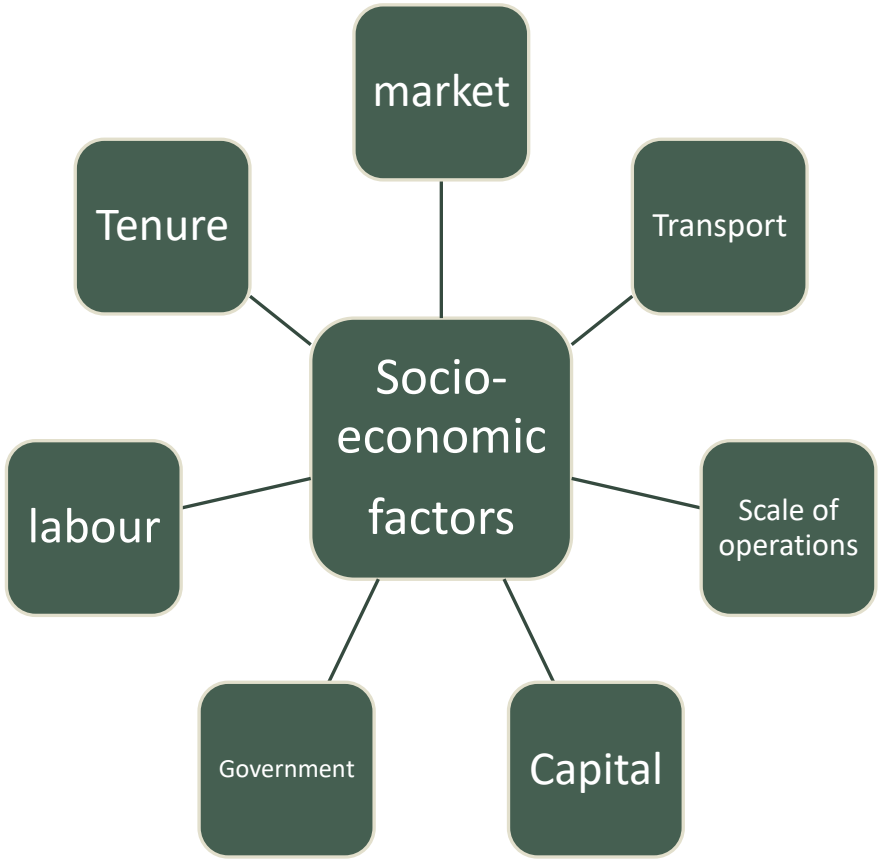
Introduction

Agriculture is an integral part of smart growth. The ability to feed one's own population is critical to the independence of any state. The ability to feed the local population from local sources should not be underestimated. Perhaps because of its long-term presence in the study area, agriculture tends to be taken for granted. Many people expect that it will continue in perpetuity and that as it is pushed out of one area by urban expansion, it will relocate in another area that is less subject to growth pressure. This assumption is false.

Agriculture is a diverse industry with very specific locational connections. Certain crops can only be grown in specific locations where the combination of a variety of factors including soil, moisture, temperature, and topography is right. When such areas are lost to agriculture, the ability to produce the crops that require that particular combination of factors is also lost. The public needs to understand that agricultural land is a nonrenewable resource requiring appropriate management techniques. Before allowing land to go out of production, decision makers must consider the implications of that decision and evaluate it .

Factors


soil
Physical factors
climate
Relief


market
Tenure
Transport
Socio-economic factors
labour
Scale of operations
Government
Capital

Problem statement

The farmer face the issue of lesser crop yield, due to improper crop pattern, less resources and many of such factors.

The goal here is to solve this problem, by creating platform where user (in this case farmer) can sign in ,get proper analysis reports for his land/crop .Also, along with that platform focuses on developing common communication medium of farmers,investors,retailers market and government, which will centralize the agriculture department.

Motivation

As in India, farming is one of the primary occupation of most of population still we lack in the profits/economy when it comes to farming. The lack of knowledge, resources and poor policies deplete the crop yields ,subsequently leading farmers to take harsh decisions.

Also, almost everyone from team comes from farmers background and have faced/seen similar issues. Hence, it seemed the perfect opportunity as software engineers to deliver a product which can help farmers to boost their crop yield ,providing them right market, acquainting with better policies /schemes thereby help them doing agriculture is more resourceful way

Proposed System

Business case: The final aim is to create a GUI for users(farmers) where user can signup and get statistics ,recommendations on crop as well as communicate with market .

Project deliverables: create a web based application for mobile and desktop users which include 1. recommendation feature ,connect to market feature also the profit tracker for each account.

Constraints: limited data for learning and transactions due to IAM issues .

Exclusions: as mentioned in the constraints ,it wont be including transaction feature.

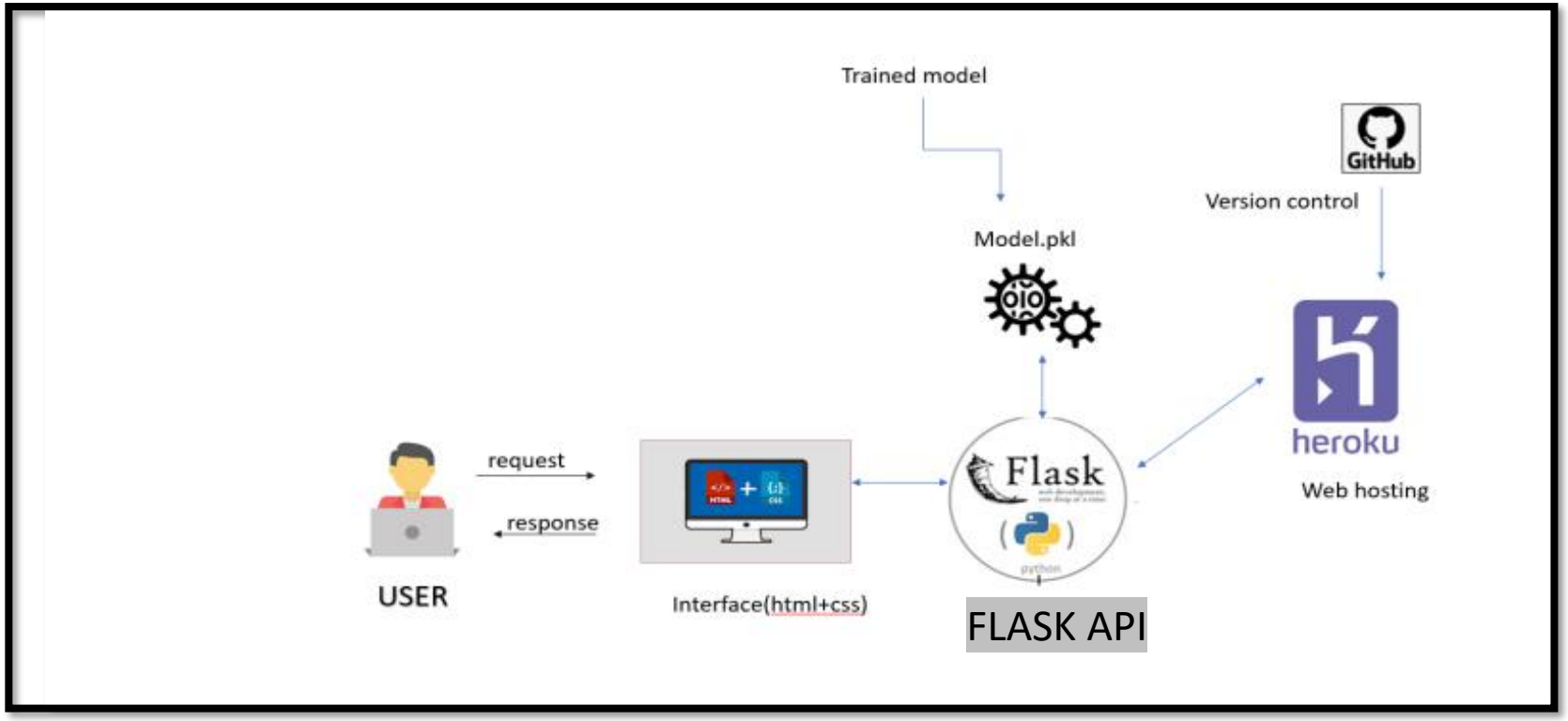
Literature Survey

Sr. No.	Papers	Topic Reviewed/ Algorithms or methodology used
1	Crop Prediction using Machine Learning. Authors: Kalimuthu, P. Vaishnavi, M. Kishore	In this paper, the authors have proposed machine learning algorithm which suggest crop based on input parameters like soil, temperature, etc.
2	Prediction of Crop Yield using Regression Analysis Authors: Renuka, Sujata Terdal	In this paper, the authors have deeply elaborated and explained the approach of Regression

3	Evaluation of Machine Learning Algorithms for Crop Authors: Kshira Sagar Sahoo, Bata Krishna Tripathy, Bata Krishna Tripathy, Somula Ramasubbareddy	In this paper, the authors have proposed support vector machine, decision tree and KNN methodology.
4	Impact of Machine Learning Techniques in Precision Agriculture Authors: Rahul Katarya, Ashutosh Raturi, Abhinav Mehndiratta, Abhinav Thapper	In this paper, the authors have explained different applications of machine learning for agriculture.

System Architecture

1.Reccomendation module



System Architecture

2.Market Module