AI-Assisted Farming for Crop Recommendation and Farm Yield Prediction

Abstract:

Agriculture is the major source of India and advancements in this sector in terms of technology are low. Digital Farming and Precision Agriculture allow precise utilization of inputs like seed, water, pesticides, and fertilizers at the right time to the crop for maximizing productivity, quality, and yields. Most of the farmers practice traditional farming patterns to decide crops to be cultivated in a field. This project will try to bridge the gap between agriculture and current technology. I had done the initial steps of data cleaning, data preprocessing, data analysis and applied various machine learning algorithms like linear regression, logistic regression, Support Vector Machine(SVM), Random Forest(RF). Finally, the model which has high accuracy on test data with less MAE and MSE values is chosen for deployment. This can be helpful for farmers as a personal assistant to them and also for newbie farmers wishing to start agriculture without any prior experience.