



# Prediction of Right Seeds Sowing Session Using Machine Learning Approach (Wolaita Zone, Ethiopia)

## Abstract

The digital transformation of agriculture has evolved various aspects of management into artificial intelligent systems for the sake of making value from the ever-increasing data originated from numerous sources. A subset of artificial intelligence, namely machine learning, has a considerable potential to handle numerous challenges in the establishment of knowledge-based farming

## Introduction

Agriculture plays a significant role in the economy of human being. However, in our country there is no automated agriculture pestering mechanism and irrigation system due to people are frequently affecting by drought. These are due to:- Climate variability and other factors, lack of support on information and modern techniques of farming, Depend on rainfall or there is no irrigation.

## Methodology

The methodology adopted for this work includes the collection of datasets, features identification, data augmentation, classification using machine learning algorithms like KNN, Naive Bayes, and CART implementation, implementation of ensemble approach for better accuracy with fine-tuning, and comparison of results.

## Introduction cont..

The agricultural land area in Ethiopia is 33.56 %, but approximately 20.5 percent of households are estimated to be food insecure .



Seasonality, ~~variability~~, ~~risks~~ and Hazards

## Methodology cont..

### Data sets

Data collected from Wolaita Zone selected weredas and kebeles & Interviewing selected kebele's farmer's Sampling techniques Sampling techniques is an act, process, or

## Methodology cont..

Before sampling it is important that knowing total professional agricultural experts size. From available Woredas of Woalita Zone the study will purposively select 5 Woredaas and of which again select 10 kebeles and from each kebele 5 respondent and total 250