

A
Project Report
On

**Study of Time Series satellite data towards Crop
Intensification**

By
POUSHALI BHOWMIK
22001400301017

Under the guidance of
Krunal B Suthar

A Thesis submitted to
The Charutar Vidyamandal University in Partial Fulfillment of the
Requirements for the Master of Science Degree in

Geoinformatics

May 2022

**Institute of Science & Technology for Advanced Studies & Research
(ISTAR), Vallabh Vidhya Nagar, Gujarat-India**



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**STUDY OF TIME SERIES SATELLITE DATA
TOWARDS
CROP INTENSIFICATION**

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Under the guidance of

Mr. Krunal B. Suthar
Internal Guide

Prabir Kumar Das
External Guide

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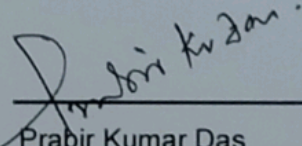
National Remote Sensing Centre
Indian Space Research Organization
Plot No.: BG-2, Action Area-1B
New Town, Kolkata-700156

CERTIFICATE

This is to certify that Poushali Bhowmik, M.Sc. student of Department of Geoinformatics, Institute of Science and Technology for Advanced Studies and Research, CVM University, has undertaken her project on “**Study of time-series satellite data towards crop intensification**” under my guidance (online mode) during January-April, 2022.

Date: 07th May, 2022

Place: Kolkata


Prabir Kumar Das
Scientist/Engineer SF,
RRSC-E, ISRO, Kolkata

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COMPLIANCE CERTIFICATE

This is to certify that work embodied in this project work titled “Study Of Time Series satellite data towards crop intensification” was carried out by Mr. / Miss **Poushali Bhowmik - 22001400301017** at **Institute of Science & Technology for Advanced Studies & Research (ISTAR)** for partial fulfillment of **Master of Science** degree in **Geoinformatics** to be awarded by **The Charutar Vidyamandal University**. This project work has carried out under my guidance and supervision and it is up to my satisfaction.

Date: 02-05-2022

Place: ISTAR, V.V. Nagar

Poushali Bhowmik
(22001400301017)
(Student)

Prabir kumar das
(Guide)



CERTIFICATE

This is to certify that project work embodied in this project work titled “Study Of Time Series satelite data towards crop intensification” was carried out by Mr. / Miss **Poushali Bhowmik** at **Institute of Science & Technology for Advanced Studies & Research (ISTAR)** for partial fulfillment of **Master of Science** degree in **Geoinformatics** to be awarded by **The Charutar Vidyamandal University**. This project work has carried out under my guidance and supervision and it is up to my satisfaction.

Date: 02-05-2022

Place: ISTAR, V.V. Nagar

Internal Guide

Mr. Krunal B. Suthar
Assistant Professor ✓

Dr. K. H. Patel
Director

DECLARATION

I declare that the Thesis entitled “*Study of Time Series satellite data towards crop intensification*” submitted by me for the partial fulfillment of the course **M.Sc. Geoinformatics** for the degree of M.Sc. in Geoinformatics, ISTAR college CVM university, is the work carried by me between December 2021 to April 2022. This work was carried out under the guidance of **Krunal Suthar and** has not formed the basis for the award of any degree, diploma, associateship, fellowship, title in this or any other University or other Institution of higher learning.

I further declare that the material obtained from other sources has been duly acknowledged in the dissertation.

Signature of the Candidate
(Poushali Bhowmik)

Date: 05/05/2022

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(POUSHALI BHOWMIK)

PREFACE

This dissertation work is aimed at describing the Crop Intensification from the land use/ land cover image using remotely sensed data and geographic information systems (GIS) tools.

Chapter 1 consist the theory about the study area and the period of time of the study, also the objectives of this study.

Chapter 2 introduces the Agricultural area, spatial spread of built-up area and natural vegetation in India such as West Bengal agricultural area, Rain-fed Agricultural area, Birbhum Agricultural Area etc.

Chapter 3 describes the land utilization of the study area. This shows how the land of the birbhum district is used for cultivation.