# VISVESVARAYA TECHNOLOGICAL UNIVERSITY
## "Jnana Sangama" Belagavi – 590 010

**PROJECT REPORT ON**

# "VISUALIZATION OF LULCC IN MOODBIDRI TALUK USING MODERATE RESOLUTION SATELLITE IMAGERIES"

Submitted in partial fulfillment of the requirements for the award of degree

**BACHELOR OF ENGINEERING IN**

**COMPUTER SCIENCE ENGINEERING**

**Submitted By**


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Under the Guidance of

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**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi

Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

Accredited by NAAC with A+ Grade

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka


**2023 – 2024**

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## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

## CERTIFICATE

This is to certify that the Project entitled **"VISUALIZATION OF LULCC IN MOODBIDRI TALUK USING MODERATE RESOLUTION SATELLITE IMAGERIES"** has been successfully completed by

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the bonafide students of **Department of Computer Science Engineering, Alva's Institute of Engineering and Technology** in partial fulfillment for the award of BACHELOR OF ENGINEERING in **DEPARTMENT OF COMPUTER SCIENCE ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved and satisfied the academic requirements in respect to Project work prescribed for the Bachelor of Engineering Degree.

21/5/2024

**Dr. Vinay Shivamurthy**
**Project Guide**

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i) .....  .....

ii) .....  .....

# ABSTRACT

In the current study, the Land Use and Land Cover Change (LULCC) of Moodbidri taluk will be investigated. Moodbidri taluk is located in the Dakshina Kannada district of Karnataka state, formed in the year 2018. The taluk has an area of 298 sq.km and includes 28 villages. Agroclimatically, Moodbidri is situated in the coastal belt of Karnataka, characterized by high humidity levels. The temperature in the region varies between 20°C to 36°C, with an average annual rainfall of 4530 mm. Paddy, arecanut, nutmeg, and cashew are among the important crops grown in the area. The region has witnessed a shift towards cash crops and expanding infrastructure, leading to landscape modifications and changes in land use functionalities. The current work aims to study LULCC in Moodbidri using long-term remote sensing data (Landsat series) and open-source technologies. Field investigations will be conducted in the taluk using Mobile GIS to identify various land use types for the current year. Machine learning techniques will be employed to analyze long-term satellite data, from historic to current, to visualize changes in the landscape. The outcomes of this study can provide valuable insights for decision-makers, regional planners, government and non-government entities, the public, and researchers, aiding in better understanding and decision-making towards sustainable wellbeing.