

# Building Footprint Extraction – Kerala

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## Overview

The Town and country Planning Act 2016, mandates constitution of State Town and country Planning Committee with its main function pinned on the preparation of Spatial Perspective plan (SPP) for the state of Kerala. The SPP shall contain

- Integrated vision for the spatial development of the state;
- Strategies and policies for spatial development over a horizon of twenty years.

The state of Kerala exhibits a unique pattern of human settlements characterized by urban-rural continuum. This is evident in the urban agglomeration that has been happening over the last few decades.

Unplanned and unchecked Settlements are also paving for increased impediments in providing acceptable level of service in urban areas. In a bid to study the urbanization trends in the state of Kerala, the department is in need of data pertaining to settlements over the last decade. In this context, LSGD Planning has been looking at High resolution satellite imageries for extraction of Building footprint.

## Problem

Extracting building footprints in dense settlements as well sparse settlements amidst tree canopy with a high accuracy is a challenge. The extraction of building footprint from Optical satellite imageries on the above said areas throws high false positive outcomes. We are looking for a better algorithm or alternative methodologies to realise the following outcomes.

## Expected Outcome

- Dataset extraction shall be performed for the entire state of Kerala, at yearly intervals starting from 2011 and is expected to derive from a cloud free Satellite Imagery.
- The extracted Building footprint has to be in vector format (eg: shape file) and be geo-referenced to align with our base map.
- The datasets shall preferably have point of interest from Google maps/Open street map as a separate layer
- The extracted dataset shall contain polygon features and shall be delivered in GCS as well PCS

Further information on the gaps in our extracted data has been detailed in Annexure 1.

Annexure – I

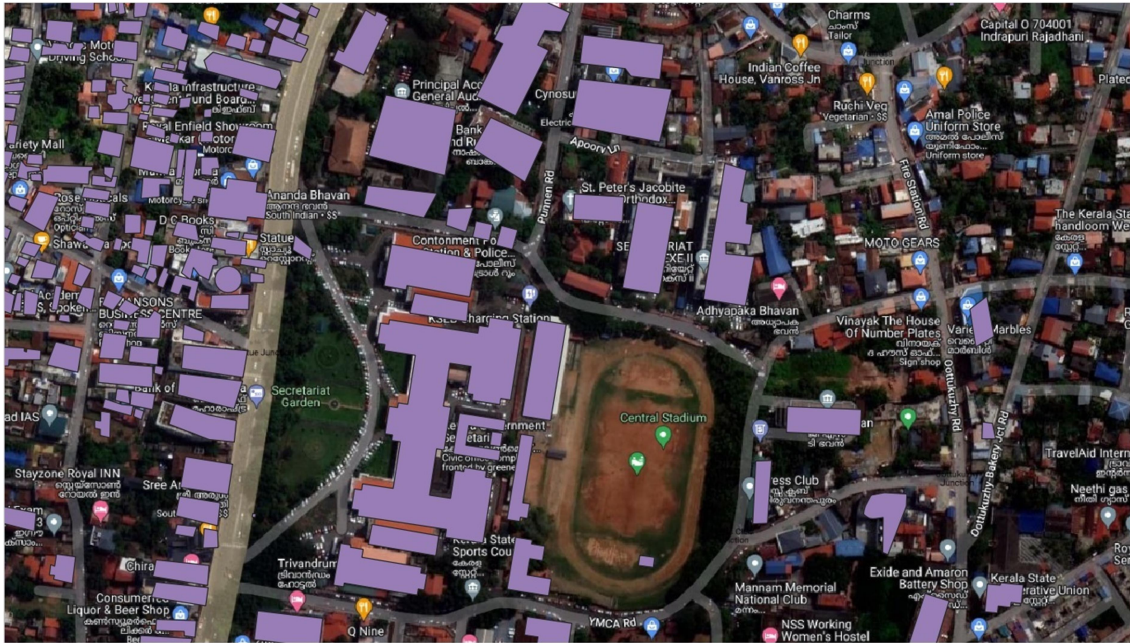


Fig.1 Trivandrum central stadium



Fig.2 Alappuzha Railway station