



GeoSpoc.®

An Ola Company

**Bringing Geospatial Transformation
to your business**

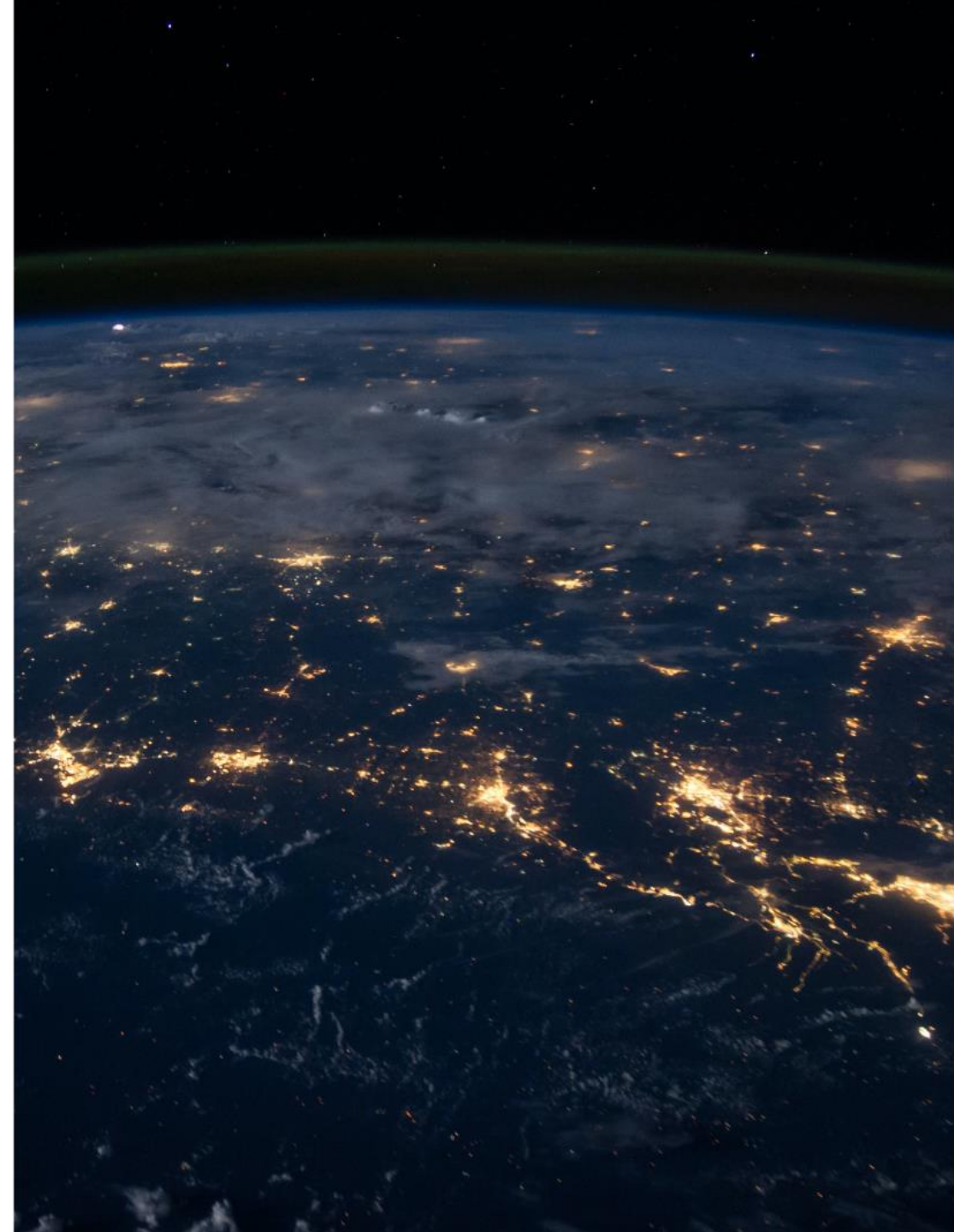
About Us



GeoSpoc is a **Geo-Analytics company**, delivering niche Geographical Information System (**GIS**) solutions, services and products since 2015.

At GeoSpoc we **provide tailored solutions** that help you identify and leverage **business opportunities** utilizing geospatial analytics.

We've recently merged with **OLA!** To build the next generation of maps and location technology right here in India.



Satellite Image Analytics



Building maps – in locations where mapping data is sparse, satellite imagery with AI and Deep learning can be used to create data



Continuous Monitoring – use satellite imaging to monitor crop growth, infrastructure change and impact of natural disasters



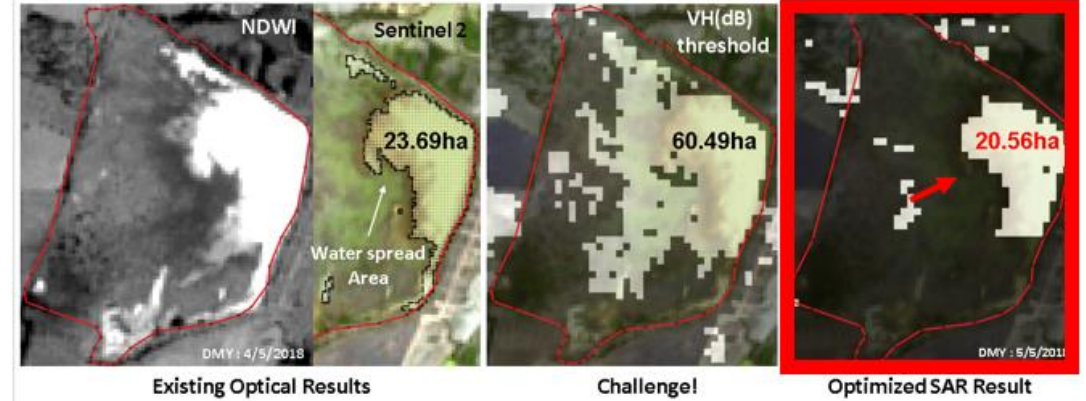
Object detection – Such as swimming pools, types of buildings, key infrastructure etc. to track the growth of a city over several years

Urban & Rural Mapping

Urban AOI



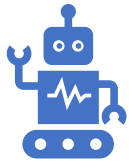
Rural AOI



- Level 1 Course Infrastructure Change detection to monitor city level changes over time.
- Level 2 Change extraction: To map Rooftop and road level changes using VHR Imagery and DL Model.
- Reverse Geocoded result in Reports. (including Indian addresses)

- Waterspread area mapping using SAR: optimized to be independent of few weather parameters like clouds and wind - (Class Mixing Reduction via Inc Angle Correction and Roughness ratios.)
- Mapping Parcel Bounds based on Satellite Data visibility.
- Monitoring Salt pans for optimal production
- Rural Flood Damage : Assimilate Soil Moisture and calibrate flood damage maps to determine the flood area

Ship Detection



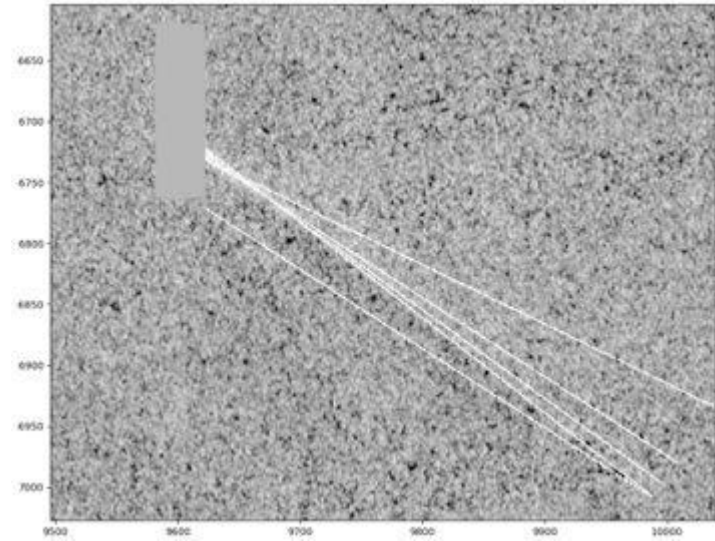
Automated SAR/optical
vessel detection(s) over
Water bodies



Wake detection to
estimate ship velocity

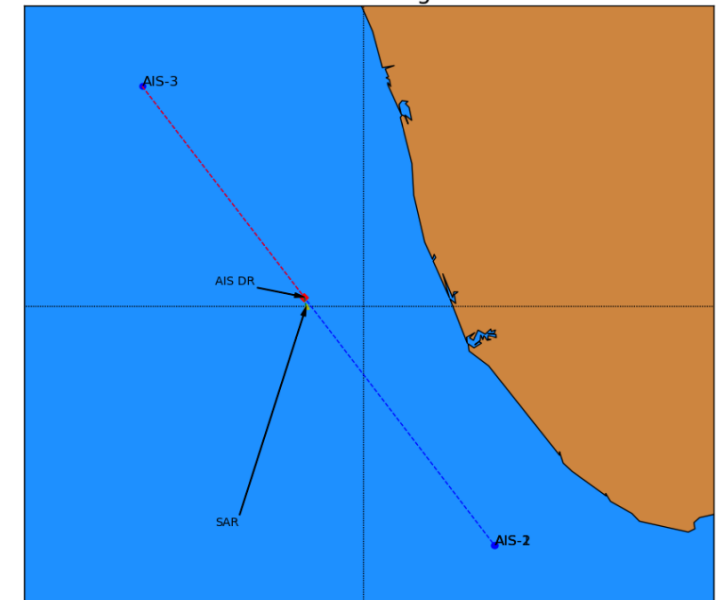


Database enrichment by
automatic correlation of
detections with AIS



Ship Detection solution can be used for Port Management like ship traffic management, cargo transportation, maritime rescue etc.,

AIS Dead Reckoning Positions



Construction Monitoring

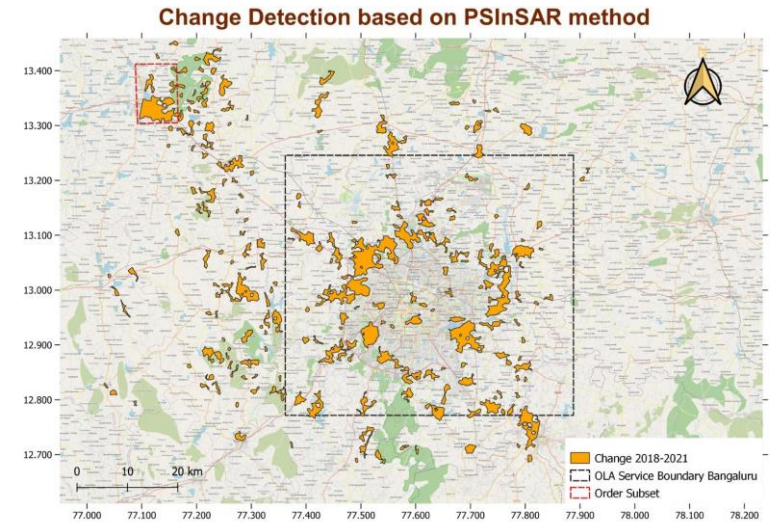
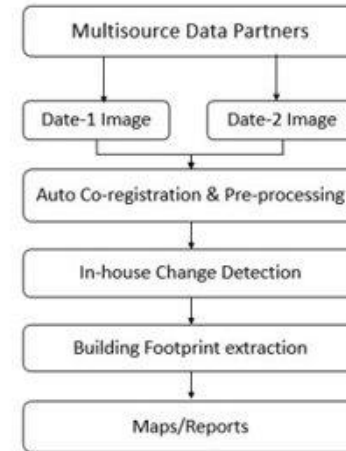
Overview Segment Changes in Construction as "Buildings" and "other infrastructure."

Determine Stage of Construction (in progress) - Soil Dig-up, Laying Foundation, Moulding/Roofing

Possible with other sensors like Worldview-4, Skysat, Pleiades. (*subject to specific acquisition geometry)

The solution can be used in land construction planning, land utilization, coverage monitoring, and construction monitoring

Change Detection Workflow



Level 1 City Level Coarse Changes



Level 2 Building Level Changes & Mapping of major & minor roads.



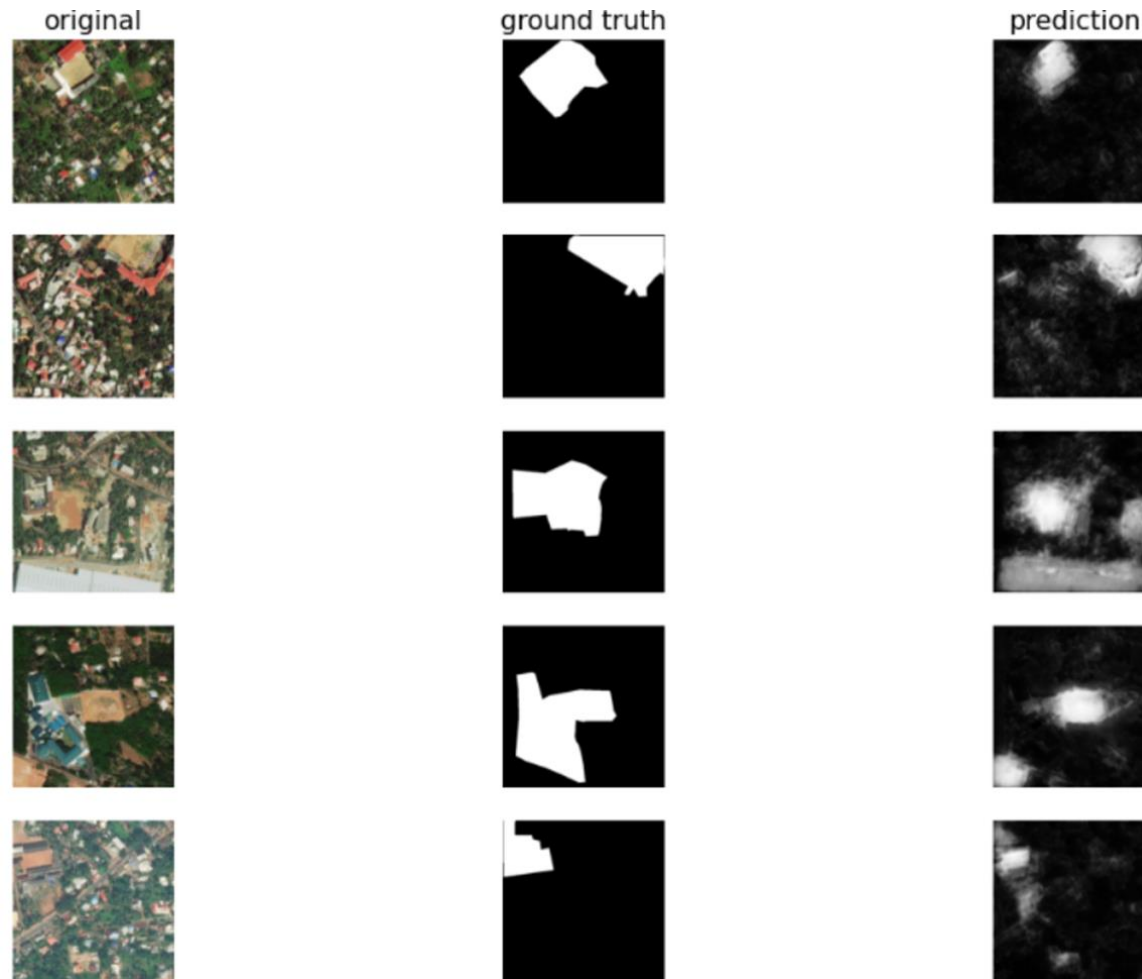
Rural School Detection

Used Freely available Mabox satellite basemap to train a DL model with a mere 250 Labels!

Opensource Project <https://geospoc.github.io/unc-sch-documentation/>

Features of Zila Parishad Schools:

- a) U/L or linear shaped buildings enclosed with
- b) Compound Wall
- c) Playground



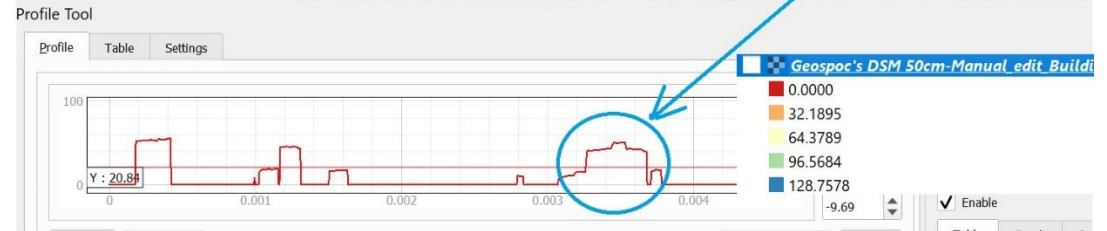
Line Of Sight

- GeoSpoc LOS Tool allows to check line of sight at customer location without on field team inspection
- The tool uses digital surface model data (satellite) to view nearby obstructions like building, trees etc.
- Calculate mast height in real time considering all the obstructions

Ortho Image



**Buildings Extracted DSM
overlayed on top of
orthoimage(RGB)**



The figure showing the Variation of heights on top of a single building and between different buildings are captured. The height fluctuations in the dome-shaped structure, for example, are plainly evident and marked with blue encircles.

Satellite Basemaps and Feature Extraction

To overcome Limitation on procuring 30cm VHR images we super resolved 1.18m Cartosat datasets to 65cm to create a Satellite Basemap

We also use these super-resolved images to extract features like road networks, building footprints, toll plaza etc, detect changes over time and update the Golden database.

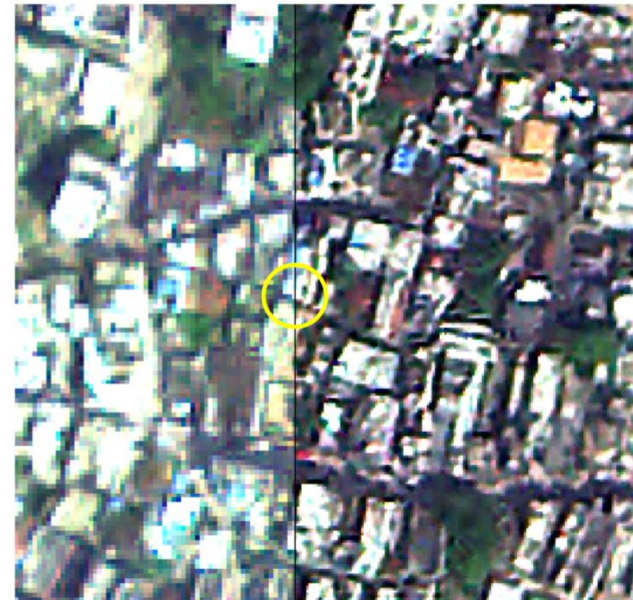
Cartosat-3 data Super Resolved from 1.1cm to 0.55cm

Input



Narrow roadways with a **width** of **2 pixels** are well resolved.

Output



Narrow roadways with a **width** of **1 pixels** are well resolved.

Input

Output

Contact Us



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