

# **Al Vihangam Drishti**

An AI based Scalable Semantic Segmentation of Aerial Drone Imagery







## **Al-VihangamDrishti**



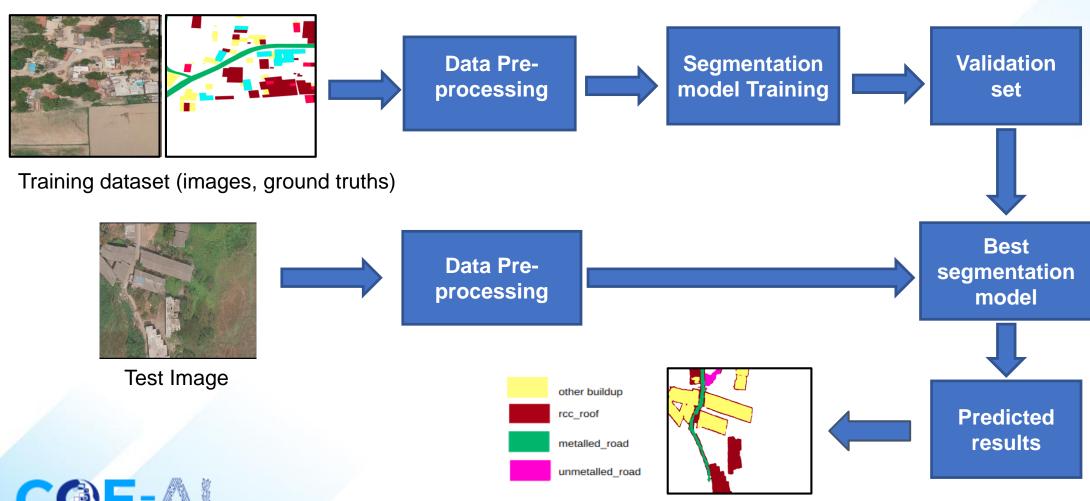
- ➤ High-resolution drone imagery (ORI) of villages/ Abadi areas made available by Survey of India for Ministry of Panchayati Raj
- Collaboration between GIS Division & AI Division of NIC for facilitation on Svamitva portal







#### **Drone Image Semantic Segmentation**



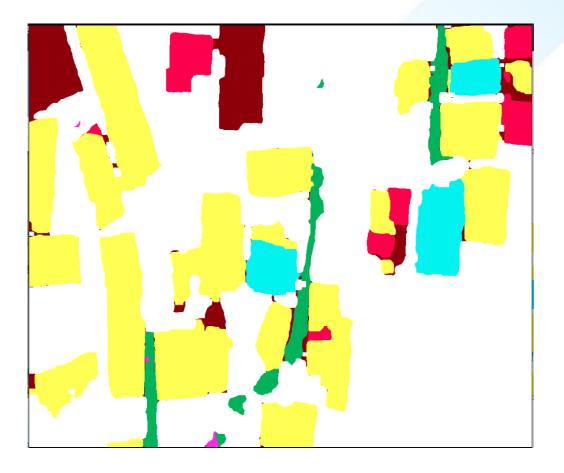


National Informatics Centre

## **Examples**



Test Image





**Predicted Result** 











Test Image

**Predicted Result** 











Test Image

Predicted Result











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Test Image

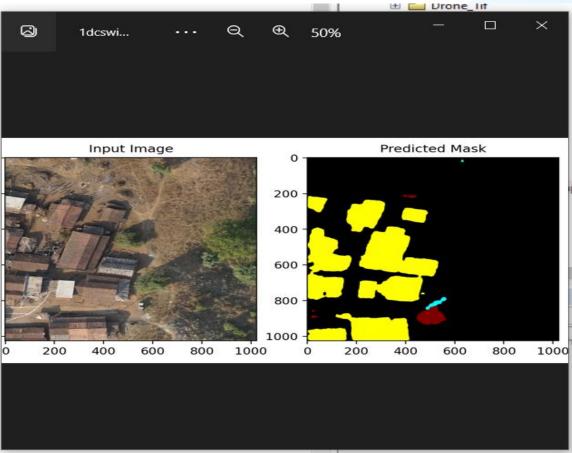






#### Visualization of Predicted Result on ArcMap











### **Use-Cases of Rooftop Detection**

- Identifying suitable rooftops for solar panel installation.
- Urban-Rural development
- Land encroachments
- Production of digital maps
- Distribution of population:
  - a. To estimate the slum areas.
  - b. Change detection in human settlements







#### **Use-Cases of Road Detection**

- Monitor and improve Road infrastructures in village areas.
- Surveying and mapping:
  - a. Creating accurate road maps for GIS applications.
  - b. Find missing road map features
  - c. Road map connectivity between rural and urban areas for sustainable regional development.





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