



GARUDALYTICS

Think Location

GSIM

Geospatial AI for Mining Operations

Dr. V S S Kiran

CEO & Founder

Gaudalytics





Index

- Executive Summary
- Problem Statement
- Importance of Geospatial AI in Mining
- Geospatial Data Sources
- Geospatial AI Applications
- Technology Advancement & Transformation
- Future Trends
- About Garudalytics

Geospatial-AI start-up based out of Telangana, is specialized in extracting insights from location data to solve real world problems with location intelligence and artificial intelligence.



Senior Management in Govt. Organizations & Private Companies in mining industry are unable to get the results using Traditional GIS Software's without the help of experts, training or offloading to GSPs



- Decision Makers in Business & Govt.
- India & International
- In high pressure jobs needing Decision Support Systems for quick impactful decision making
- Focus on the required end results and not bothered about underlying technology/ not a technical expert

1. Precision in Resource Assessment:

- Geospatial AI enables accurate resource assessment by analyzing complex geological and geospatial data.
- It enhances our ability to locate and estimate valuable deposits beneath the Earth's surface.

2. Optimal Mine Planning:

- Efficient mine planning requires the analysis of vast geospatial data, from terrain topography to ore quality.
- Geospatial AI algorithms assist in creating optimized mining plans that maximize resource recovery while minimizing environmental impact.

3. Environmental Impact Mitigation:

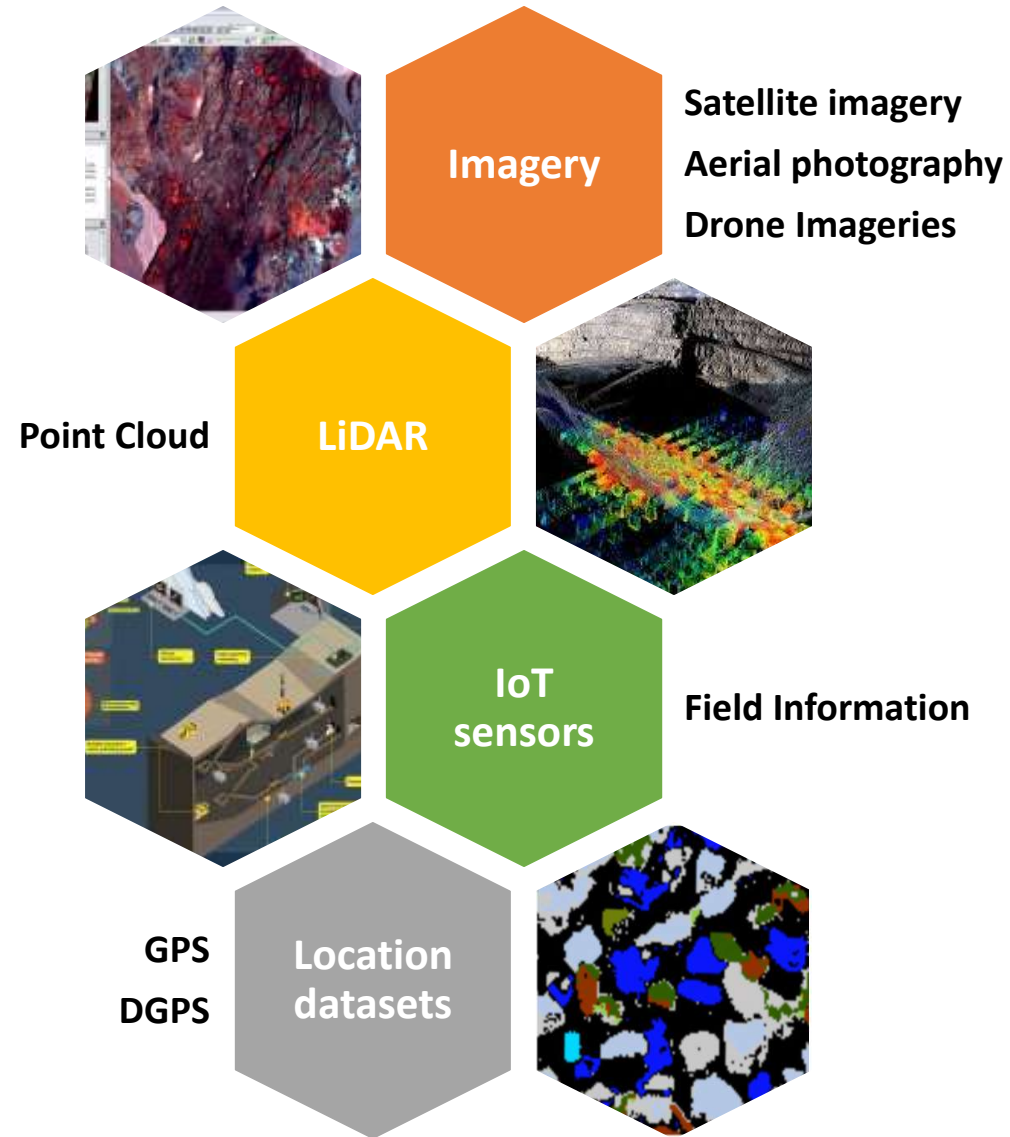
- Traditional mining practices have often resulted in ecological harm.
- Geospatial AI aids in assessing and reducing environmental impact, ensuring responsible and sustainable mining.

4. Safety and Risk Mitigation:

- Mining is inherently risky; worker safety is a top priority.
- Geospatial AI helps monitor ground stability, detect hazards, and enhance safety protocols, minimizing accidents.



Geospatial Data Sources



AI for Mining

Computer vision coupled with machine learning can classify mineral of sand grains.

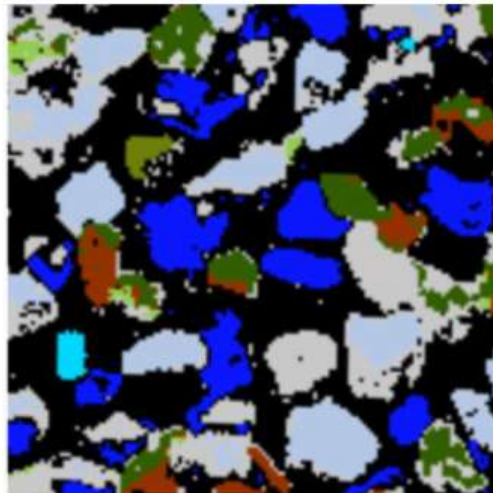
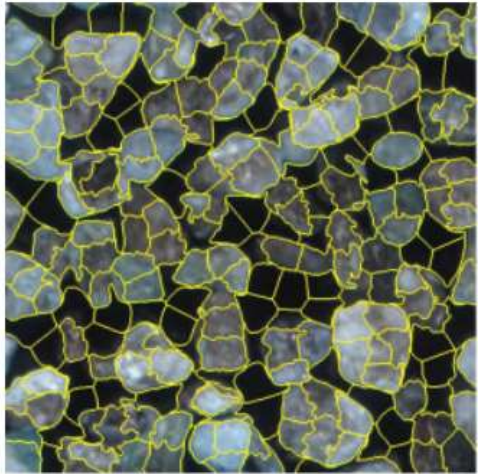


Geospatial AI Applications

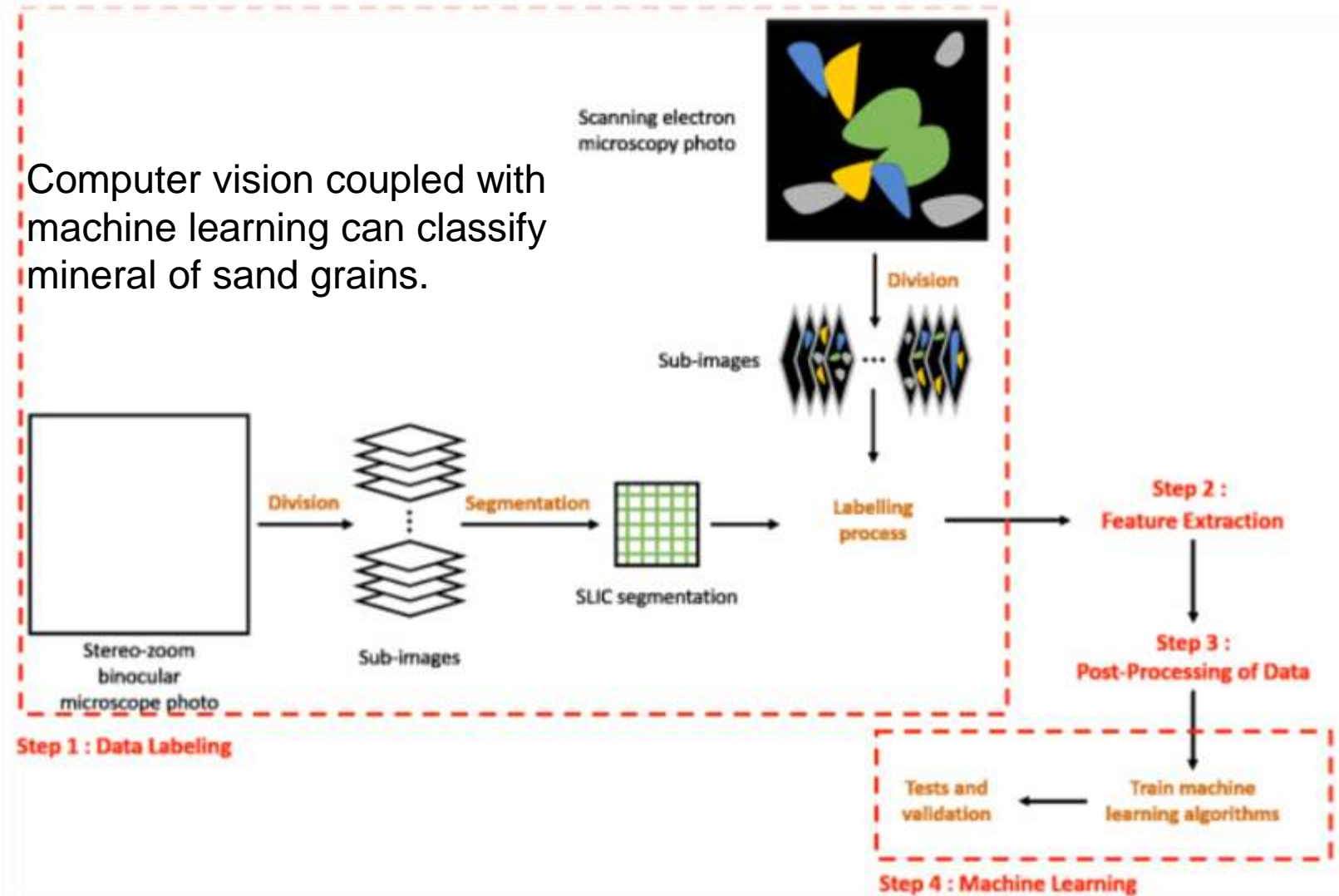
- Simplify Mineral Detection
- Assist in Mineral Extraction
- Improve Safety Standards
- Reduce Environmental Impacts



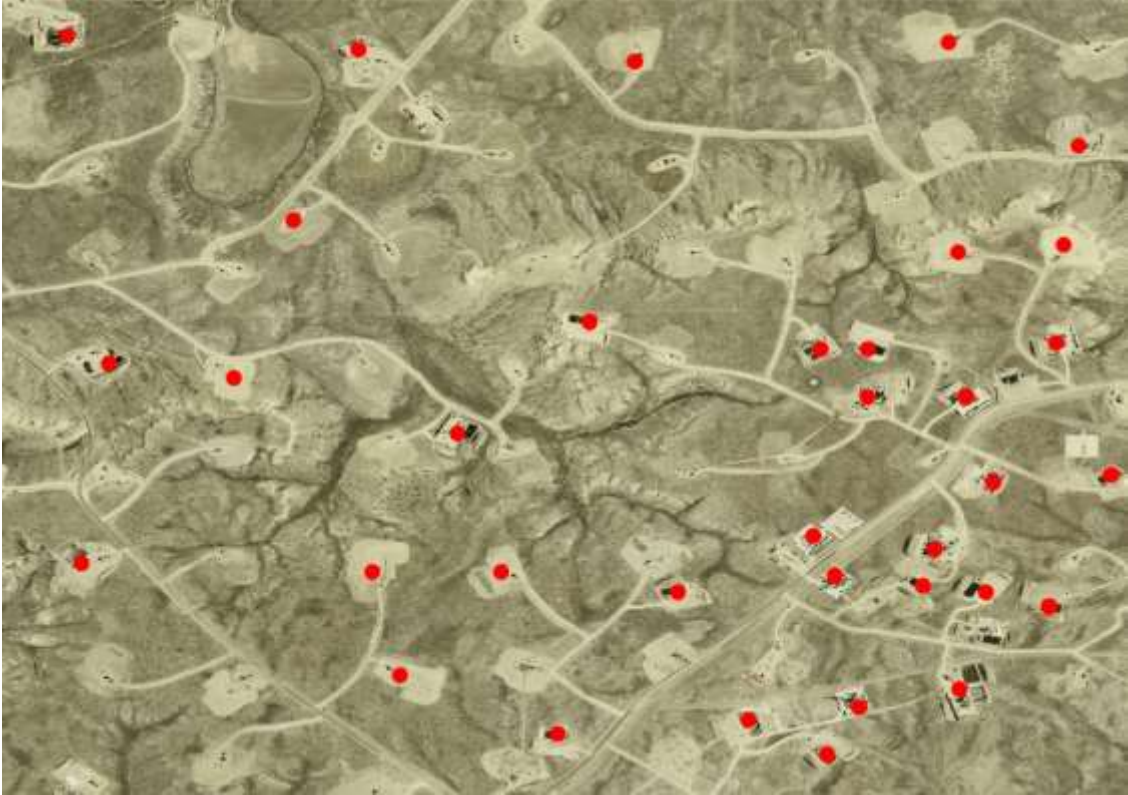
Mineral grains recognition using computer vision and machine learning



Computer vision coupled with machine learning can classify mineral of sand grains.



Oil Pad Detection



Mines Management

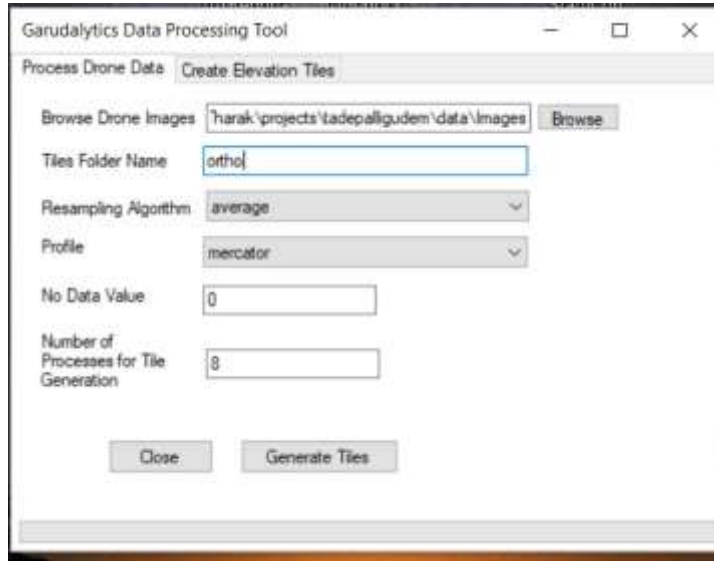


Technology Advancements

Auto Process and Generate 2D/3D products



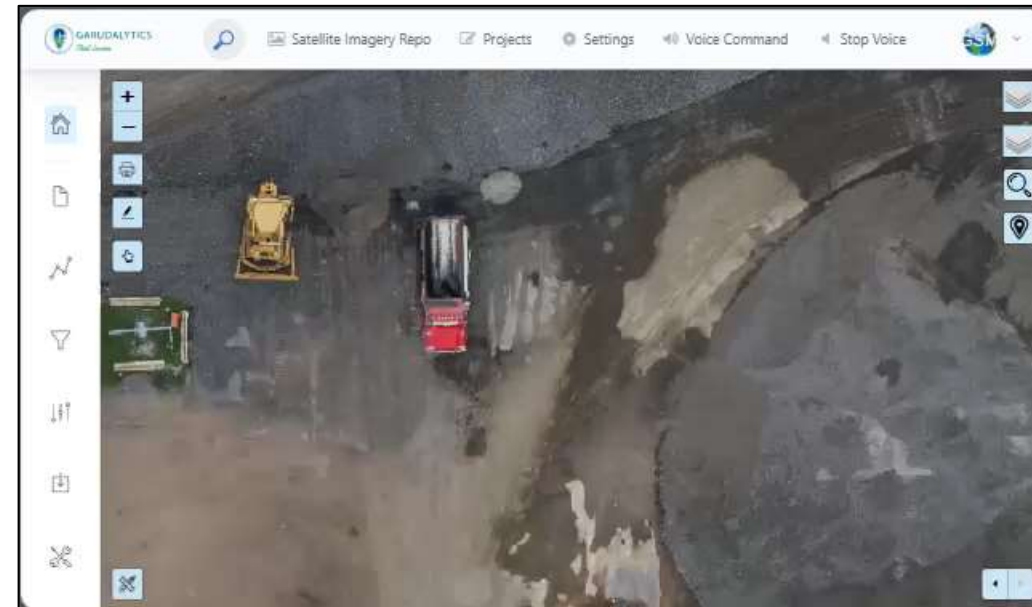
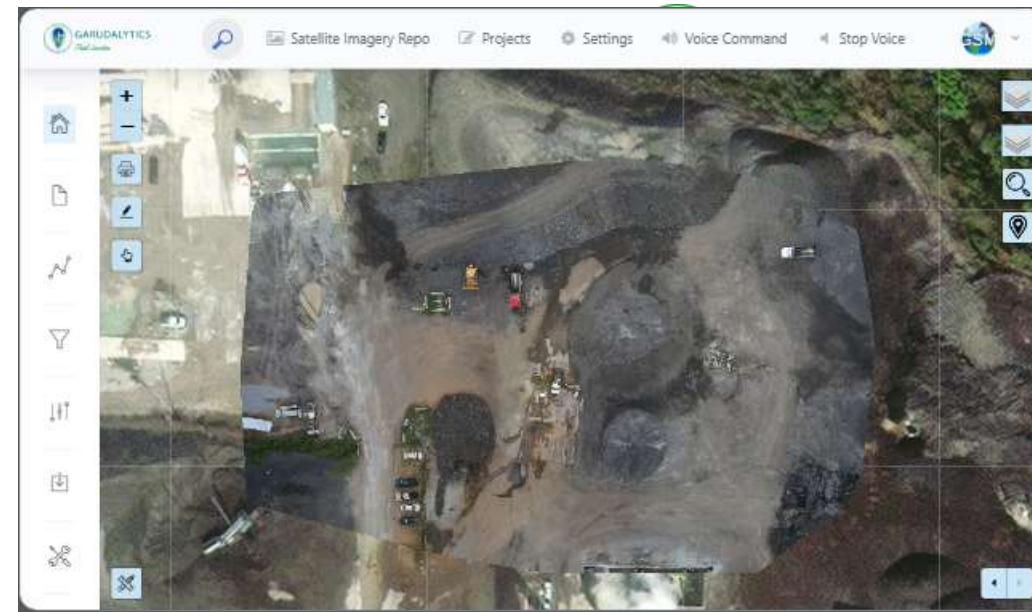
Dron Survey Data



Desktop

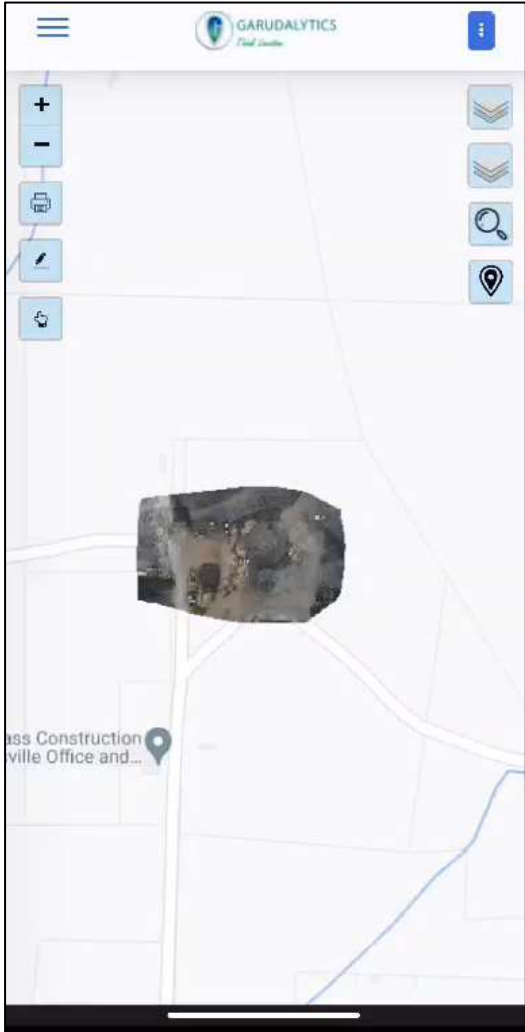


Web



Data Visualization from Any device any where

Technology Advancements

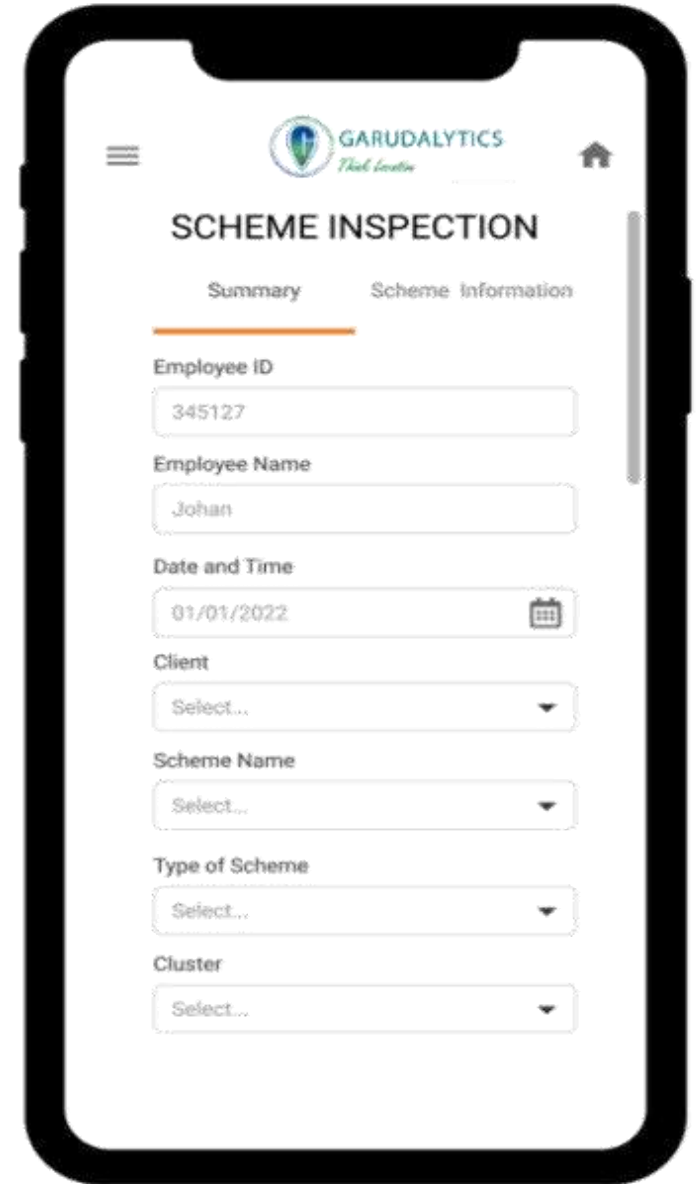
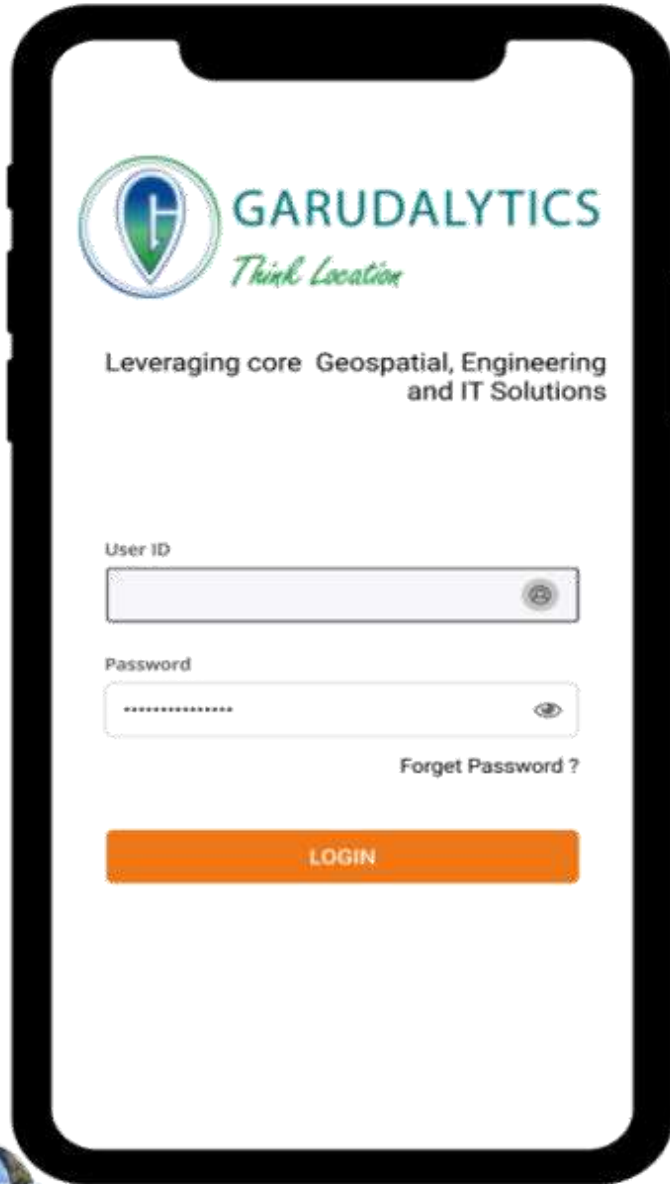


Data Accessing on Field



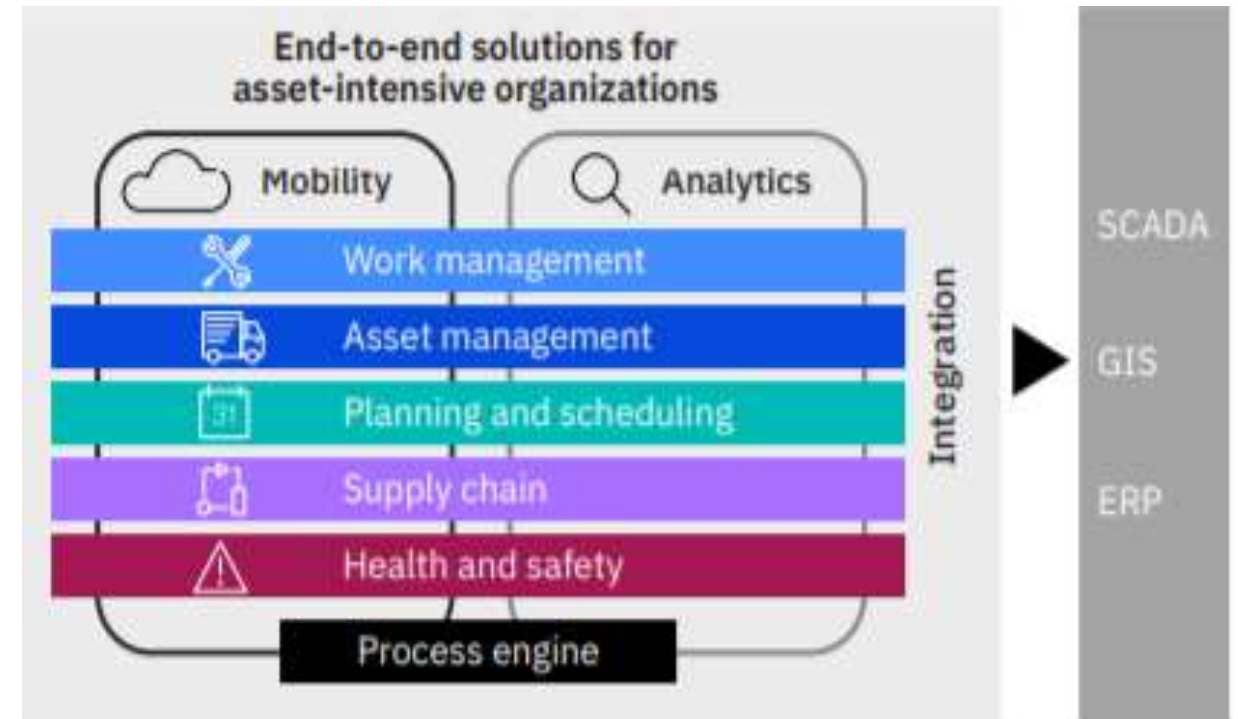
Cross Verify with other data on ground

Perform Analysis



Use GeoAI, IoT and plant-floor data to predict and prevent equipment failure, improve reliability and reduce downtime. Apply data insights to upgrade quality and lower inspection costs

- Collect, consolidate and analyze essential information on virtually all types of assets.
- Turn insights into action by analyzing historical data alongside environmental conditions
- Improve operations through better asset availability, reliability and use
- Extend asset value through condition-based maintenance
- Extend the useful life of assets or equipment, improve return on investment and defer new purchases
- Unify processes for wide-ranging asset management functions across multiple sites.



About Us



Established in 2021



Founders



Geospatial Product & Services



Product
(Application Number:
202241045046)



ISO Certified

40+ Projects
30+ Clients



Head Quarter
Hyderabad, TS



Associations
15+



15+ members team



Garudalytics Smart Mapping



Satellite Imagery Repo

Projects

Settings

Voice Command

Stop Voice



V S S Kiran

vsskiran22@garudalytics.com

GARUDALYTICS ONLINE GIS

Home

ADD LAYERS

Choose file

EDIT OPTIONS

Draw features

Change Marker Style

QUERY OPTIONS

NearBy Places

Query By Attribute

Marker Clustering

SPATIAL ANALYSIS

Types of Analysis

Create Heatmap

SWIPE BETWEEN LAYERS

Choose layers

Layers Transparency

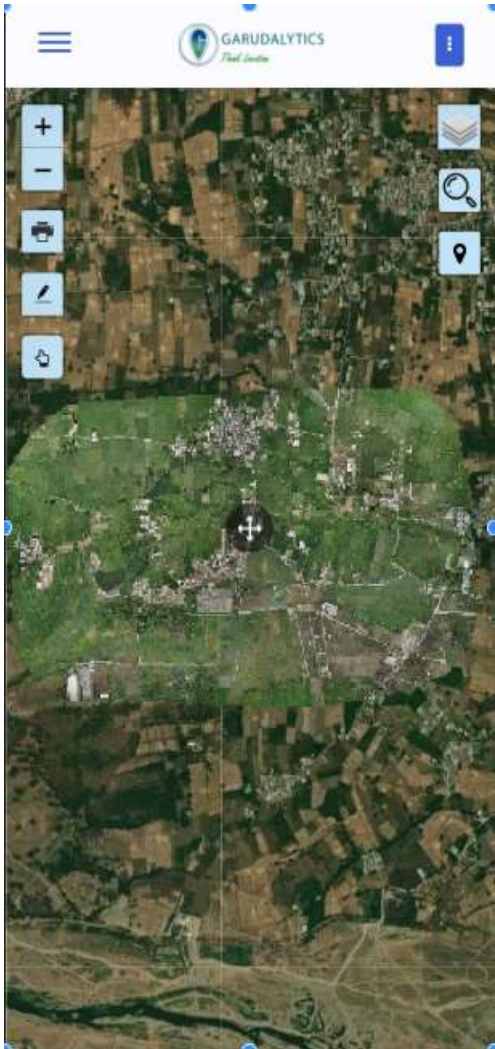
EXPORT FEATURES



Our Product : G-Field



Data Collection



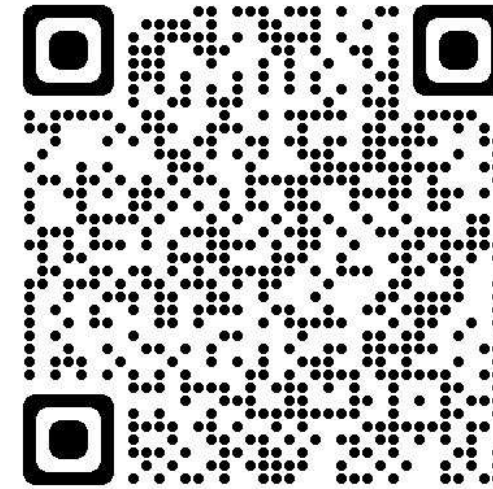
Data Creation



Updating/Integration

Form fields:

- ID/ PTIN NO
- GLR SY. NO
- DESCRIPTION OF PROPERTY
- OLD HOUSE NO
- NEW HOUSE NO
- NAME OF THE OCCUPIER/OWNER
- CLASSIFICATION
- NO. OF FLOORS
- NATURE OF CONSTRUCTIONS
- ENCROACHMENT/VIOLATIONS
- TYPE OF THE PROPERTY
- YEAR OF CONSTRUCTION
- LEASE DETAILS
- DATE OF EXPIRY OF LEASE



GSM-Use Case Video

Thank You

info@Garudalytics.com

www.Garudalytics.com
