

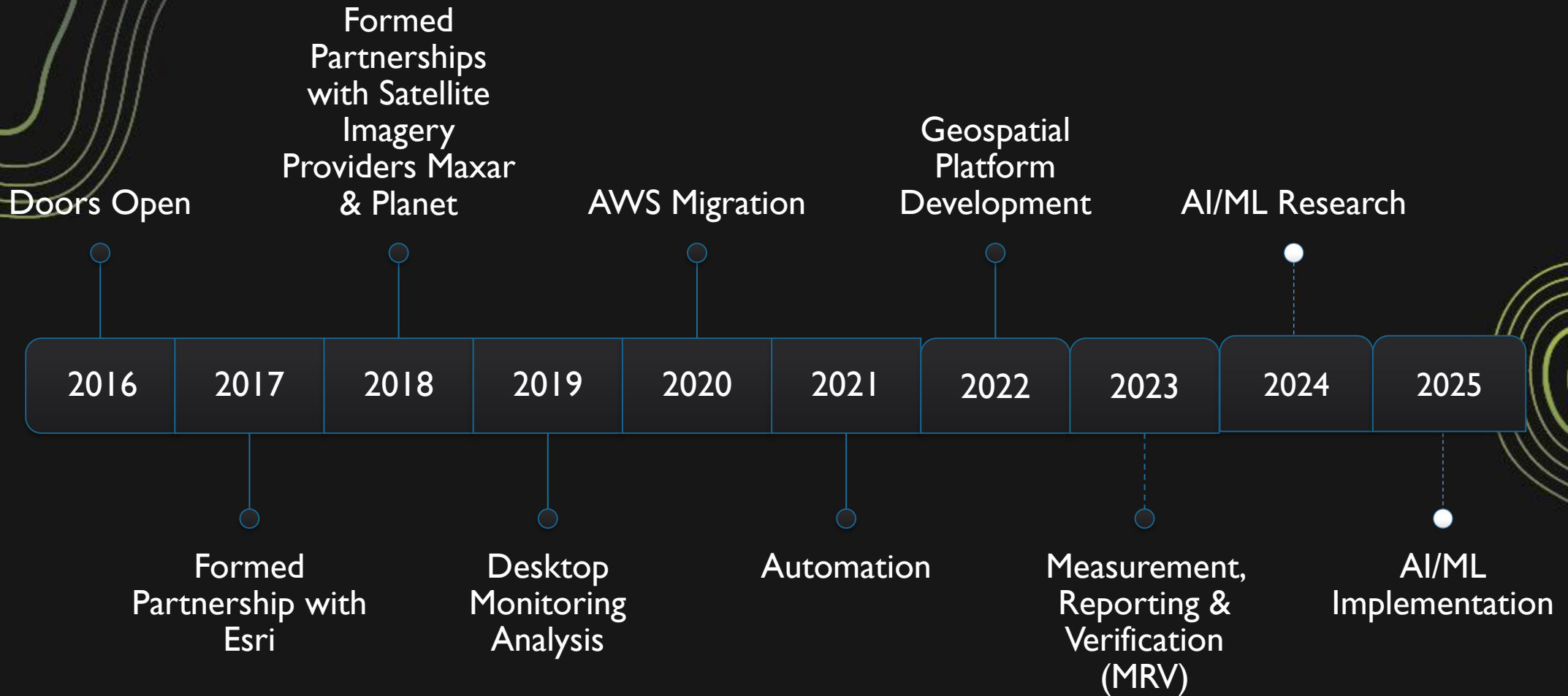


Swift Geospatial Esri UC 2025

Beyond the Horizon: Generating Insights with High-Resolution Satellite Imagery

Compiled by
Michael Breetzke
Director & Co-Founder
www.swiftgeospatial.solutions

Swift Geospatial Company profile



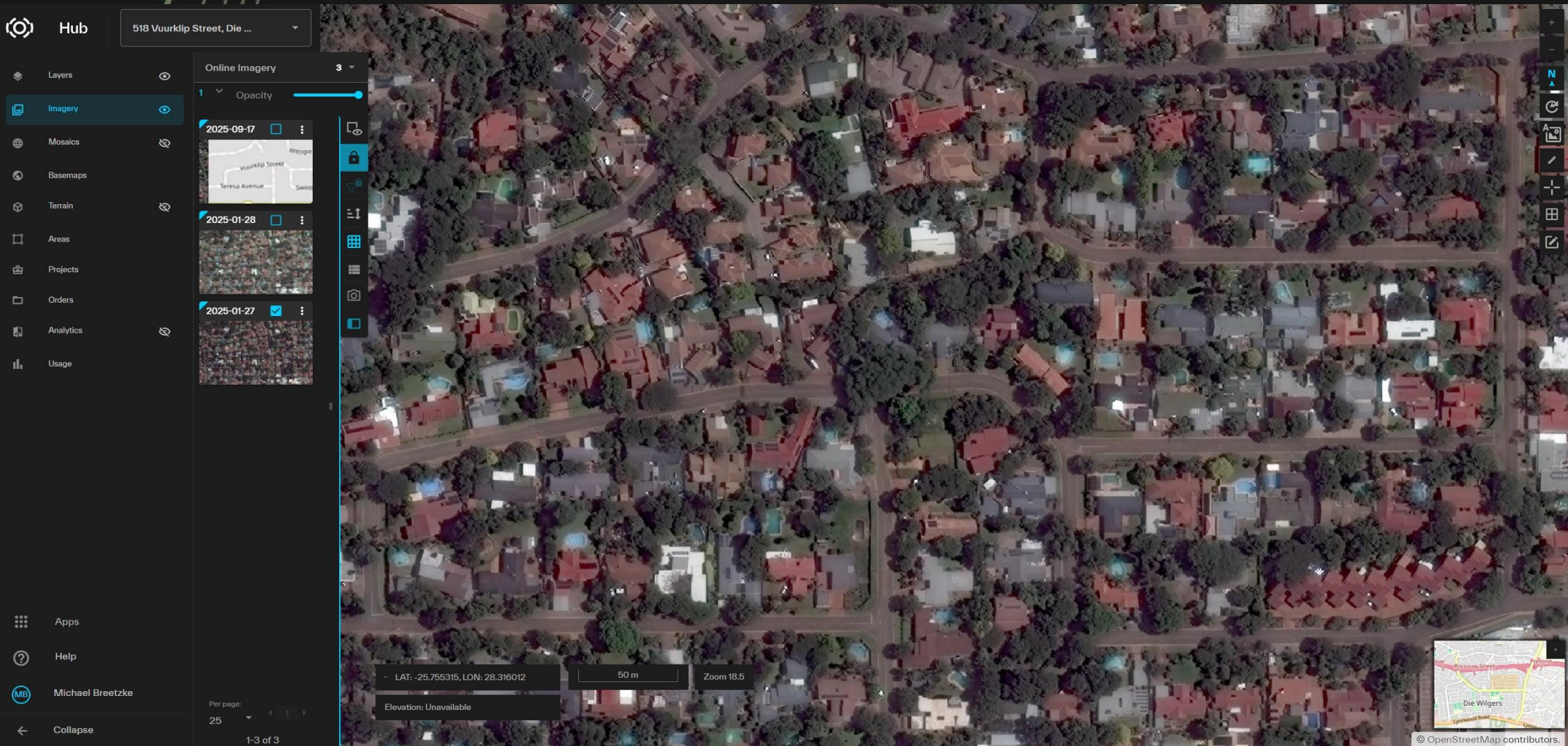
Swift Geospatial Services/Products



Starts with Imagery Access

MAXAR

Option 1: MGP-Pro Hub



Subscription Service

Starts with Imagery Access



Option 1: MGP-Pro Hub

Hub 518 Vuurklip Street, Die ...

Layers

- Imagery
- Mosaics
- Basemaps
- Terrain
- Areas
- Projects
- Orders
- Analytics
- Usage

Online Imagery 3

Opacity:

2025-09-17

2025-01-28

2025-01-27

Field	Value
Image ID	2d2184c7-ea70-4838-df03-bac26749cafd
Product Type	Pan Sharpened Natural Color
Sensor	LG01
Acquisition Date	2025-01-27T08:27:55Z
Age Days	265
Acquisition Time UTC	08:27:55 UTC
Time of Day	10:27:55
Image Ingest Date	2025-01-27T10:22:30Z
Cloud Cover	0%
Sensor Type	Optical
Off Nadir Angle	19°
NIIRS	5
Ground Sample Distance	0.3m
Sun Elevation	63°
Sun Azimuth	80°
Product Name	DAILY_TAKE
CRS	EPSG:4326
Per Pixel X	0.00000326122199112433
Per Pixel Y	-0.00000326122199112433
Archive Catalog ID	B110001101104900
Legacy Description	AOI1_L3_LGI
Is Private	false
CE90 Accuracy	8.4

LAT: -25.756718, LON: 15.888889

Elevation: Unavailable

CLOSE

Subscription Service

Starts with Imagery Access

MAXAR

Option 1: MGP-Pro Hub

Hub

Layers

Imagery

Mosaics

Basemaps

Terrain

Areas

Projects

Orders

Analytics

Usage

Apps

Help

Michael Breetzke

Collapse

518 Vuurklip Street, Die ...

Order Image

B110001101104900

IMAGE DETAILS

Order Type

☐ Online

☒ Archive

Start Order from Saved Template

Select a template to autofill the order form.

Order Name

LG01_250127_PTA

Delivery

☒ Orders Manager

☐ Ingest to Streaming

Additional Direct Delivery

Saved Locations

NOTE: All orders are delivered to the Orders Manager

☒ No Additional Delivery

☐ SFTP/FTPS Location

☐ S3 Bucket

☐ Google Cloud

☐ Azure Cloud

CANCEL

ORDER IMAGE

LAT: -25.756487, LON: 28.315361

50 m

Zoom 17.5

Elevation: Unavailable

Included in Order

Selected Area

Area Selection

518 Vuurklip Street, Die ...

Die Wilgers

Lyndenwood

© OpenStreetMap contributors.

Subscription Service

Starts with Imagery Access

MAXAR

Option 1: MGP-Pro Hub

Hub

518 Vuurklip Street, Die ...

Layers

Imagery

Mosaics

Basemaps

Terrain

Areas

Projects

Orders

Analytics

Usage

Order Image

Projection

UTM

AComp

On

Off

Kernel

MTF

HD

On

Off

Clipping

Full Image Strip (No Clipping)

Use Viewport

ORE-DEFINE

Clip to Area

Select Saved Area

Estimated Clipping Area: 1.151 sqkm

Price

Product	Rate (Credits)	Units #	Charge (Credits)
Archive Imagery Download (>90 days)	22.500 / SQ_KM	1.151	25.898

Total Price (Credits): 25.898

CANCEL

ORDER IMAGE

Image Order Confirmation

SUMMARY

Order Name

Order Type

Delivery

Additional Delivery

Clipping

Output File Format

LG01_250127_PTA

ARCHIVE

ordersManager

none

useViewport

GeoTIFF

PRICE

Product	Rate (Credits)	Units #	Charge (Credits)
Archive Imagery Download (>90 days)	22.500 / SQ_KM	1.151	25.898

Total Price (Credits): 25.898

CANCEL

PLACE ORDER

SAVE AS TEMPLATE

LAT: -25.759020, LON: 28.315109

50 m

Zoom 17.5

Elevation: Unavailable

Included in Order

Selected Area

Area Selection

Die Wilgers

© OpenStreetMap contributors.

Subscription Service

MAXAR

 $\emptyset$ $\emptyset$

5

44

5

11.

•••

②

Collapse

A donut chart with a teal background. A small segment of the chart is highlighted in a darker teal color. The number '22' is displayed in the center of the chart.

Order Type

CUSTOMIZE EXPORT

☐	Name	Status	Credits Charged	Creation Date ↓	Product Type	
☐	LG01_250127_PTA	Processing	0.0	2025-10-20 6:33:36	View-Ready Orthorectified(OR2A) Imagery	Download
☐	WV03_VNIR_250417_YH	Processing	0.0	2025-10-20 6:26:38	View-Ready Orthorectified(OR2A) Imagery	Download
☐	LG04_250807_Mafumbwe	Fulfilled	424.05	2025-10-15 6:15:47	Online Imagery	Download
☐	LG01_250613_Mumbeji	Fulfilled	243.42	2025-10-15 6:14:23	Online Imagery	Download
☐	WV03_VNIR_250611_AOI_13_b 	Fulfilled	148.78	2025-10-02 11:03:48	Online Imagery	Download
☐	WV03_VNIR_250611_AOI_13_a 	Fulfilled	101.64	2025-10-02 11:02:58	Online Imagery	Download
☐	WV03_VNIR_250611_AOI_17 	Fulfilled	217.49	2025-10-02 11:01:37	Online Imagery	Download
☐	WV03_VNIR_250611_AOI_6 	Fulfilled	175.06	2025-10-02 10:59:11	Online Imagery	Download
☐	WV03_VNIR_250611_AOI_7 	Fulfilled	174.74	2025-10-02 10:58:09	Online Imagery	Download
☐	WV03_VNIR_250523_AOI_8 	Fulfilled	173.6	2025-10-02 10:55:53	Online Imagery	Download
☐	Sample_4mDTM 	Fulfilled	178.82	2025-09-25	Vivid Terrain -	Download

Entries Per Page

25 ▼

1-25 of 26+

✓ LAT: -25.758302, LON: 28.318193

Zoom 18.5

Elevation: Unavailable

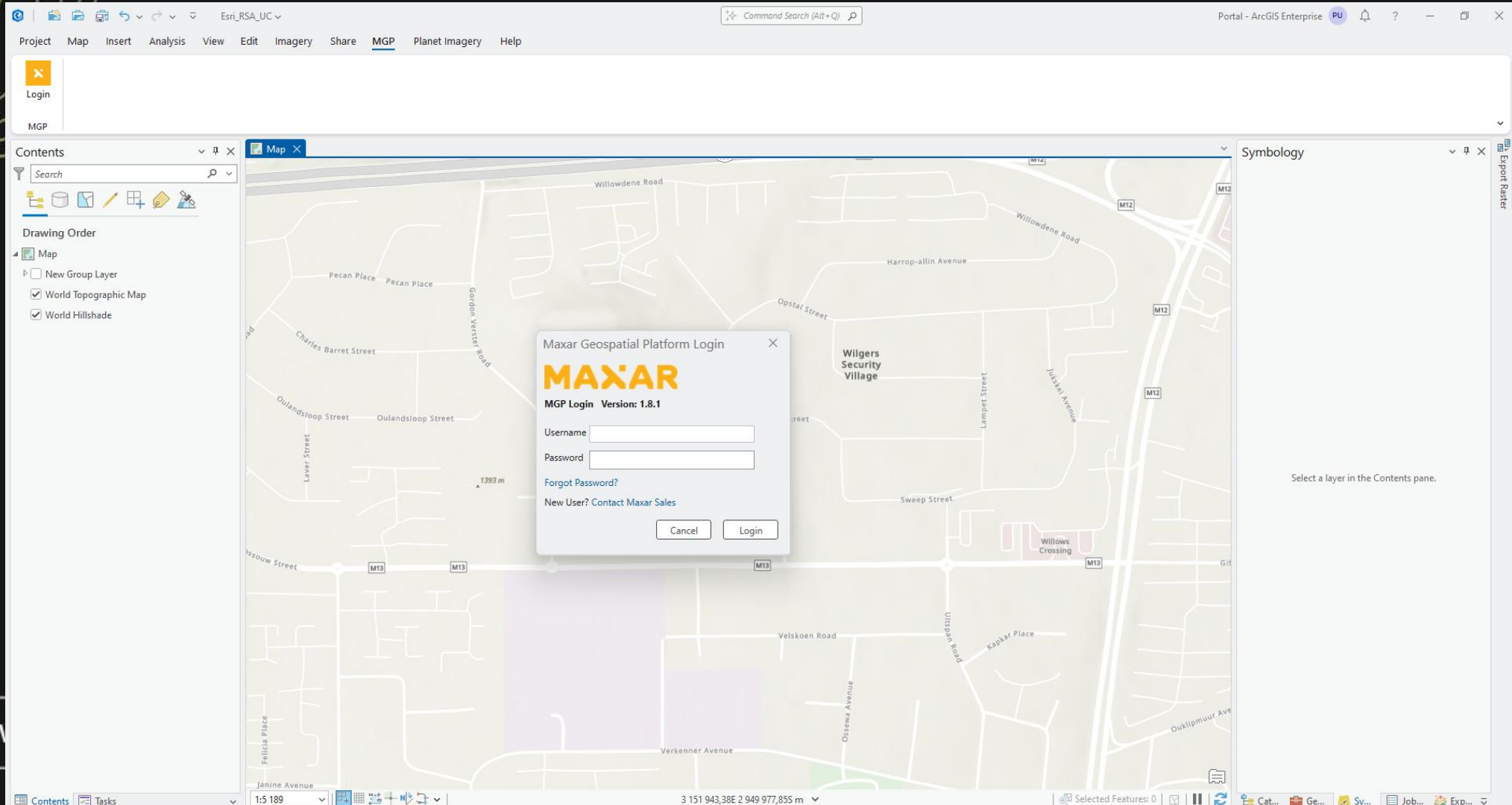
© OpenStreetMap contributors.

Subscription Service

Starts with Imagery Access

MAXAR

Option 2: MGP-Pro ArcPro Plugin



Subscription Service

Starts with Imagery Access

MAXAR

Option 2: MGP-Pro ArcPro Plugin

The screenshot displays the MAXAR MGP-Pro ArcPro Plugin interface. The main window shows a map of a residential area. Overlaid on the map is the 'Imagery Filters' dialog box, which contains the following sections:

- Acquisition Date:** From: 2025/10/27 To: 2025/10/27
- Time of Day:** Start: 00:00:00 End: 23:59:59
- Cloud Cover:** Max Percent: 0
- Off Nadir Angle:** Min: 0 Max: 0
- Sun Elevation Angle:** Min Percent: 0
- Sensor:** Select: GE01, WV01, WV02, WV03_VNIR, LG01

The 'Apply' button is at the bottom of the dialog box. On the left, the 'Contents' pane shows the 'Maxar Online Imagery' layer selected. On the right, the 'Symbology' pane shows the layer name 'WV02-2025/06/02-1...' and a message: 'The symbology cannot be modified. See the help for more information.'

Subscription Service

Starts with Imagery Access

Option 2: MGP-Pro ArcPro Plugin

MAXAR

Esri_RSA_UC

Portal - ArcGIS Enterprise

Project Map Insert Analysis View Edit Imagery Share MGP Planet Imagery Help WMS Layer

Images To Show: 5
Image Search Type: Online Imagery
Single Image Search: Enter Catalog ID or Image ID
MGP Imagery is available when map is zoomed below 1:50,000

Filters
Vivid Analytics Projects

Contents
Search
Drawing Order
Map
Maxar Online Imagery
WV02-2025/06/02-103001011475F100
GE01-2025/09/14-105001004460BD00
WV02-2025/10/03-103001011C9BAE00
WV02-2025/09/19-103001011B925800
LG01-2025/09/17-B1100011026B0300
New Group Layer
World Topographic Map
World Hillshade

Image Properties

Field	Value
Image ID	d8f4034c-f7ef-c4ec-9410-0d7e26f95bb9
Product Type	Pan Sharpened Natural Color
Sensor	WV02
Acquisition Date	2025-10-03T08:11:00Z
Age Days	24
Acquisition Time UTC	10:11:00
Time of Day	10:11:00
Image Ingest Date	2025-10-03T17:34:00Z
Cloud Cover	0
Sensor Type	Optical
Off Nadir Angle	8.279135
NIIRS	5
Ground Sample Distance	0.5 Meter
Sun Elevation	57.024885833
Sun Azimuth	54.072819666
Product Name	DAILY TAKE
CRS	EPSG:4326
Per Pixel X	4.245389845891623E-06
Per Pixel Y	-4.245389845891623E-06
Archive Catalog ID	103001011C9BAE00
Legacy Description	AOI11_L3_WV2
Is Private	false
CE90 Accuracy	8.4

Symbology - WV02-2025/10/03-1...

The symbology cannot be modified. See the help for more information.

1:8 107 3 142 394,62E 2 949 711,60S m

Selected Features: 0

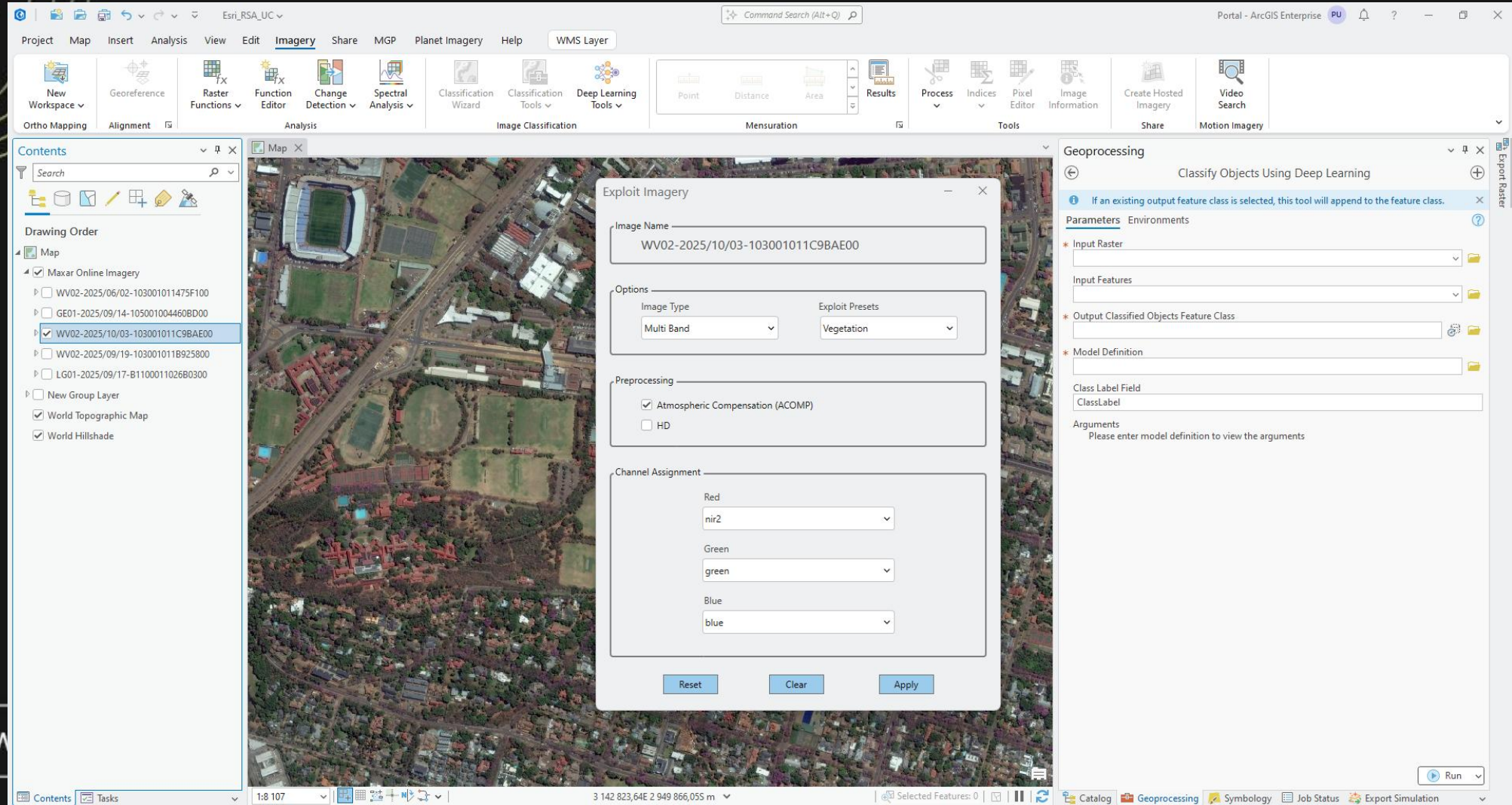
Cat... Ge... Sy... Job... Exp...

Subscription Service

Starts with Imagery Access

MAXAR

Option 2: MGP-Pro ArcPro Plugin

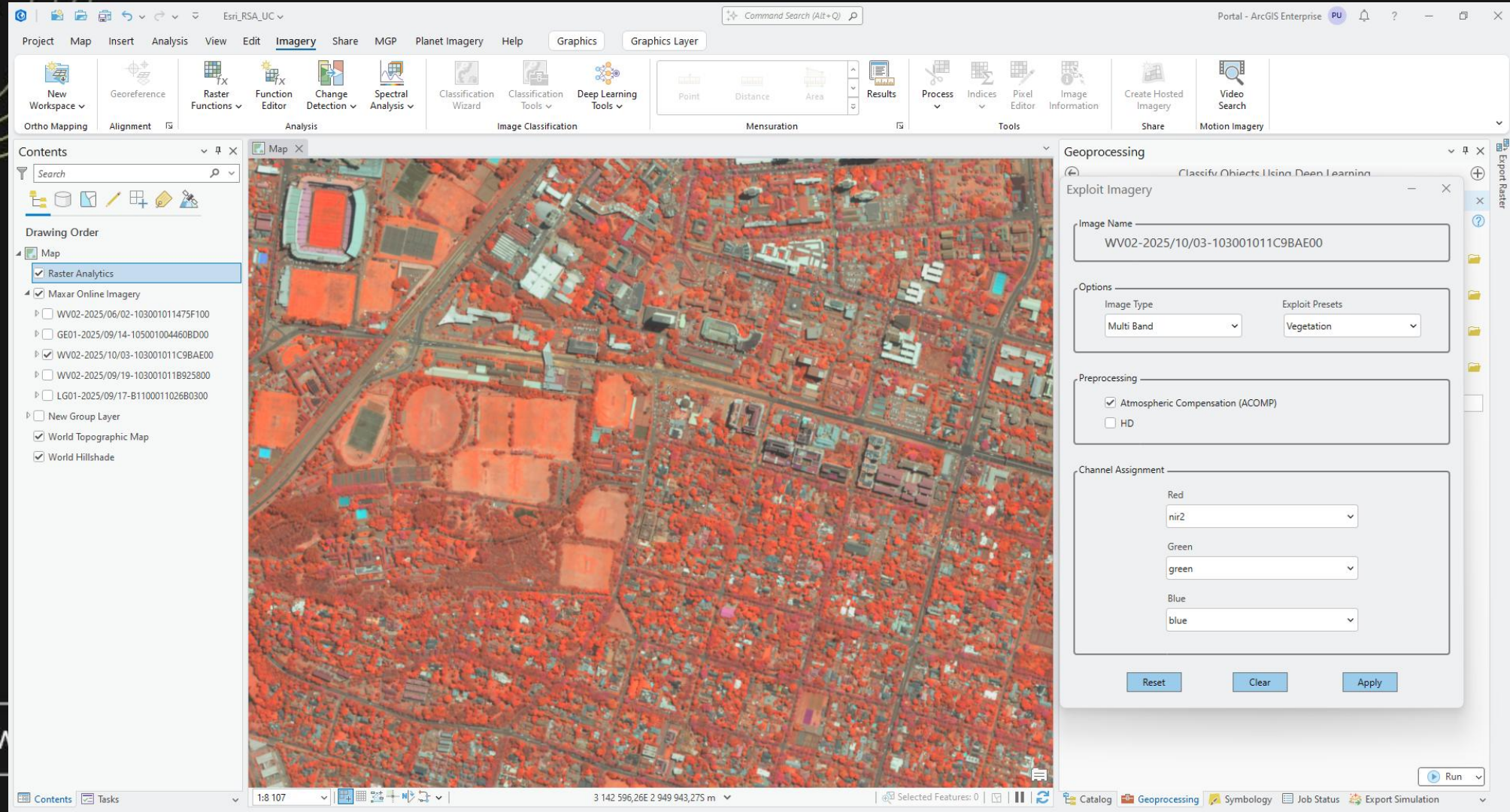


Subscription Service

Starts with Imagery Access

MAXAR

Option 2: MGP-Pro ArcPro Plugin



Subscription Service

False Colour Analysis

MAXAR

Option 2: MGP-Pro ArcPro Plugin

Subscription Service



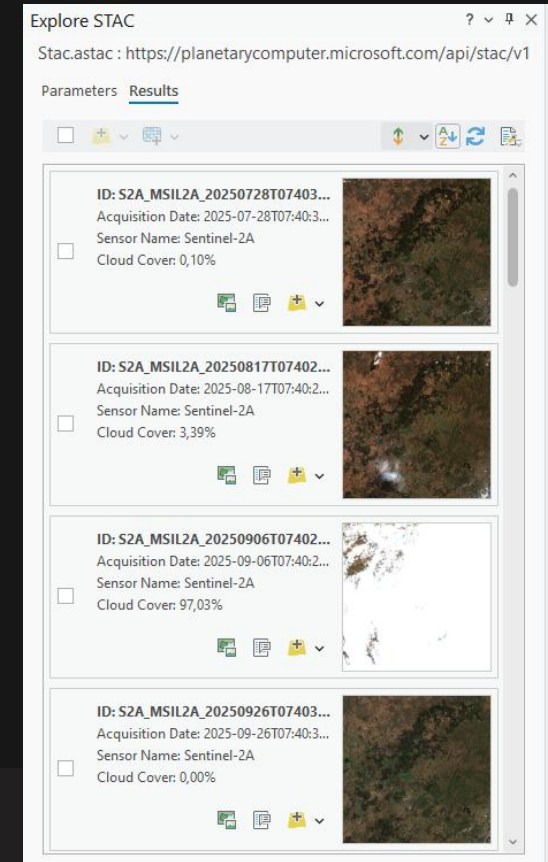
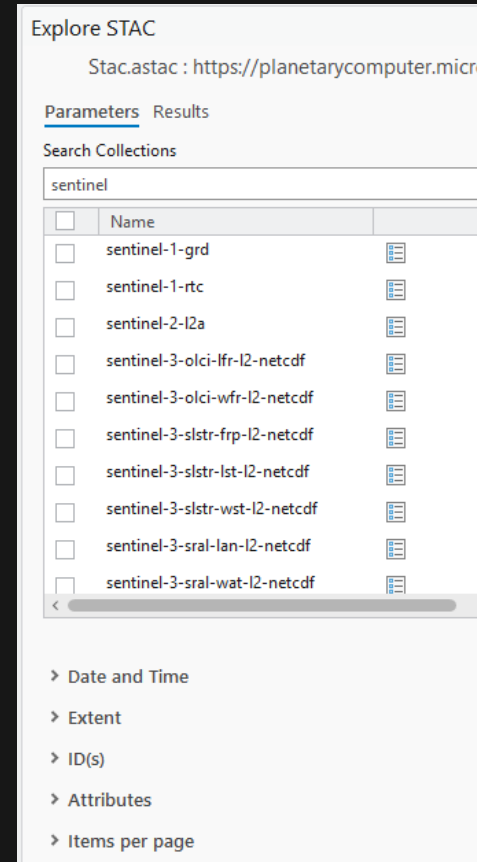
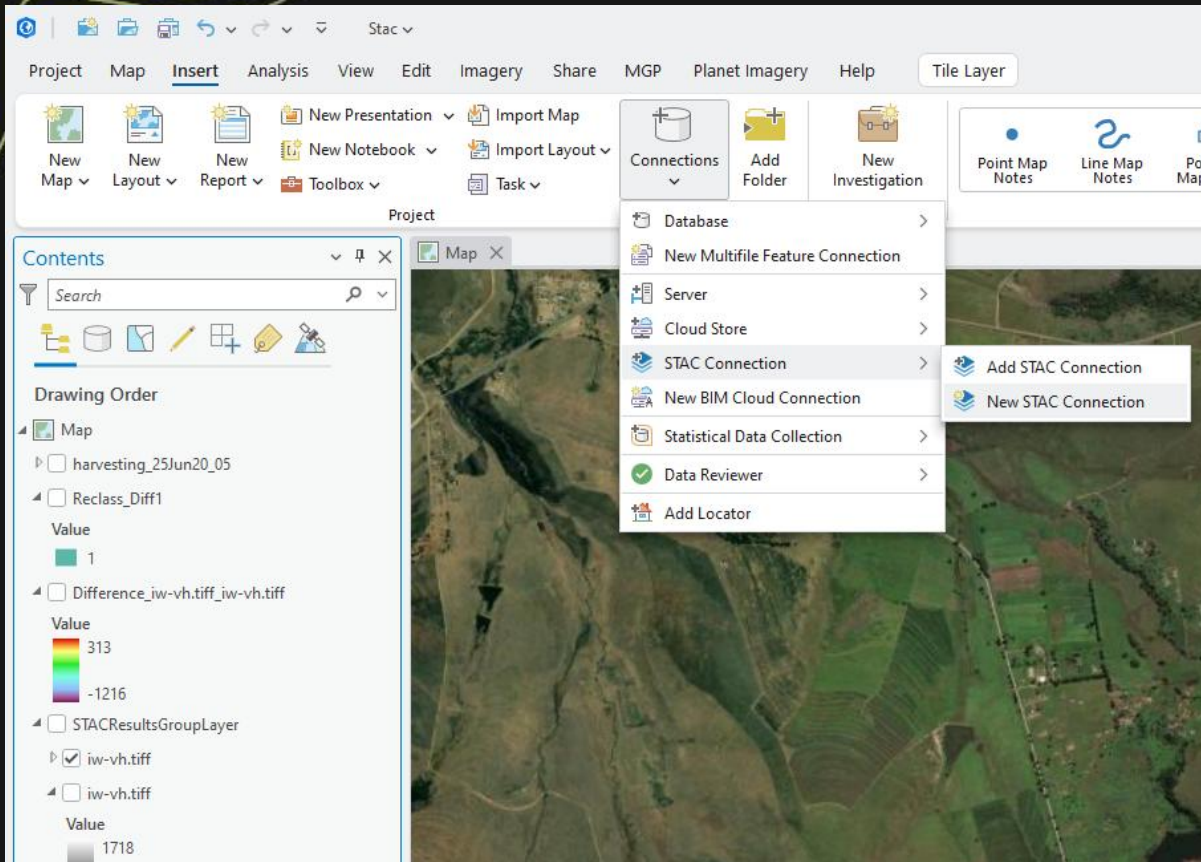
Using band combination to pull our vegetation

Starts with Imagery Access

Option 3: Esri SpatioTemporal Asset Catalog (STAC)

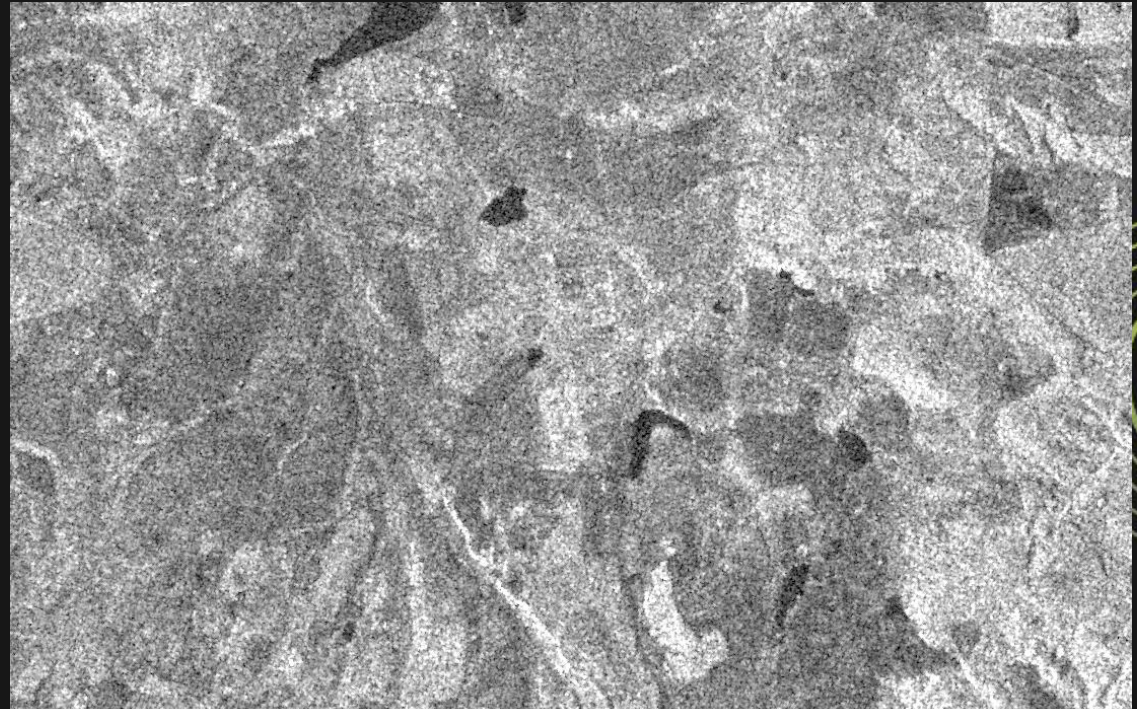
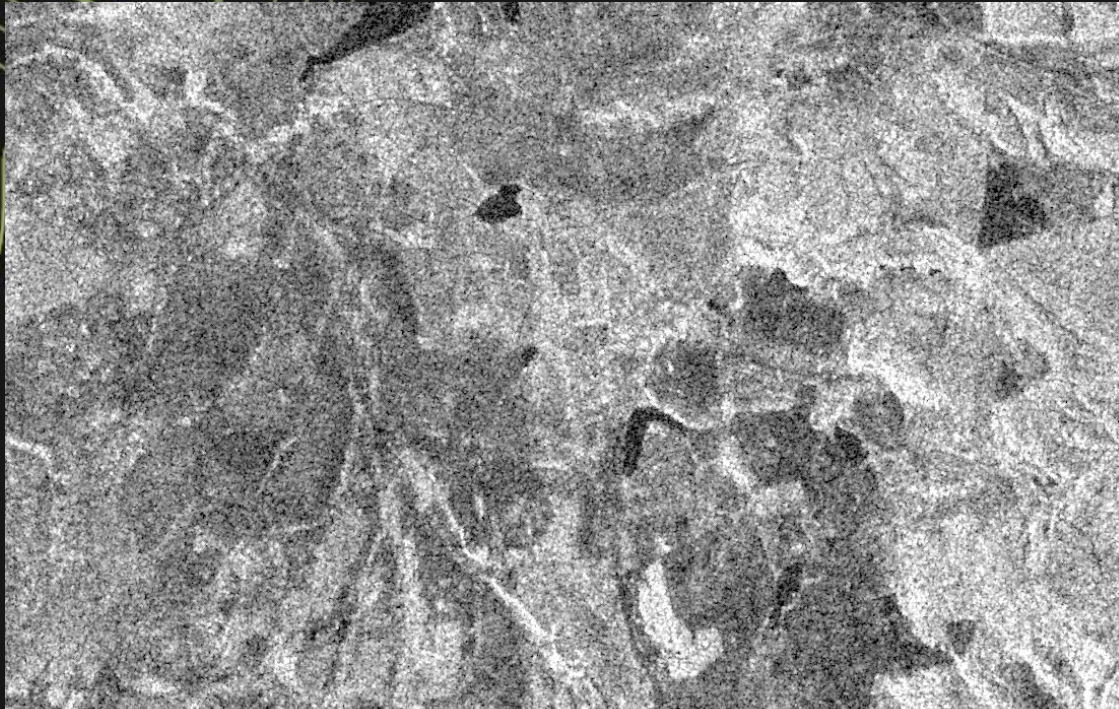
STAC is a standard that provides a common structure for exposing and cataloging data such as Imagery, SAR, Point Clouds, Data Cubes, Full Motion Video, and more from data providers. STAC enables access to different formats of spatial data and provides a common way to find more information about a geographic location over a period of time.

Free Service



Sentinel-1 SAR Analysis

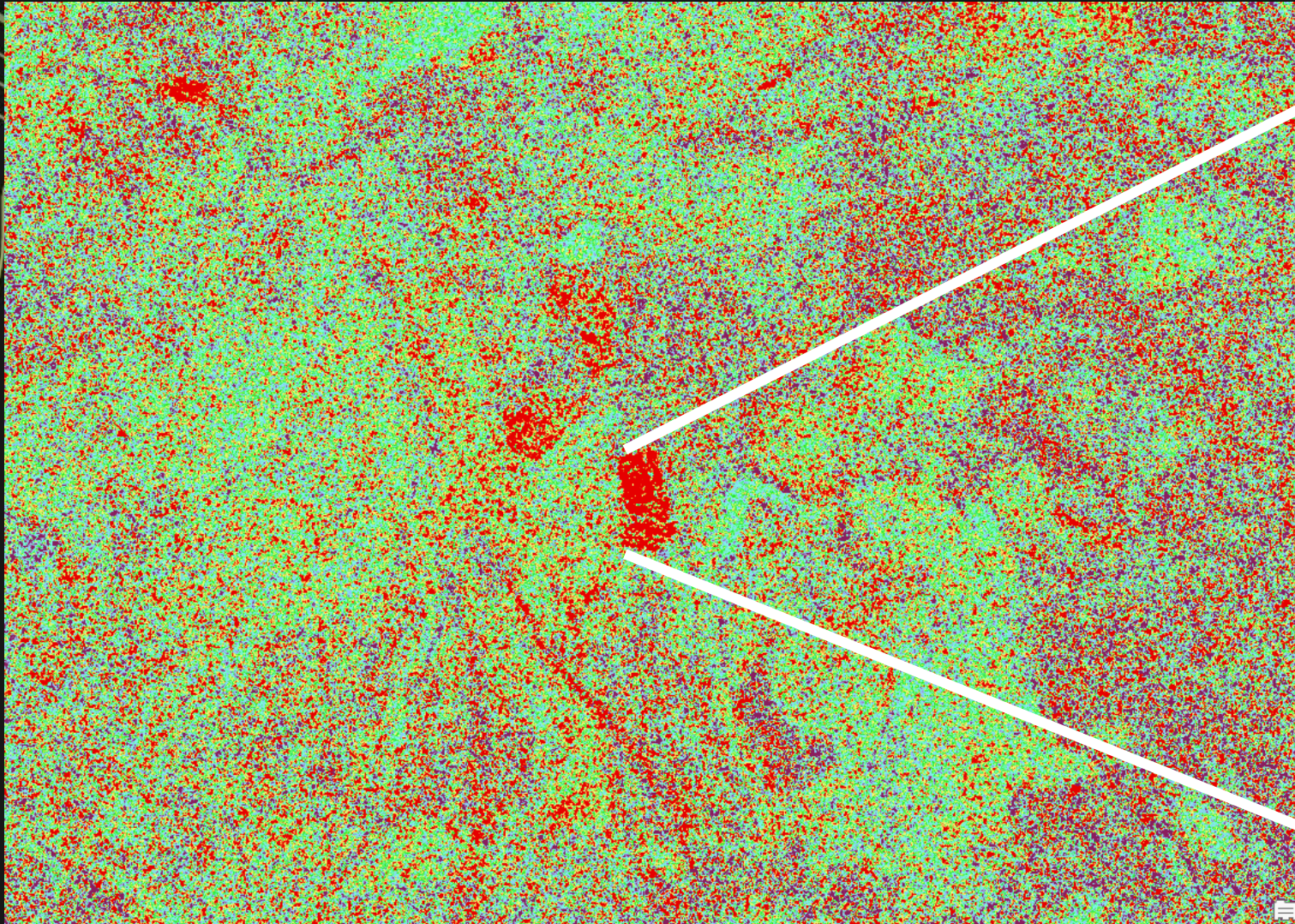
Option 3: Esri SpatioTemporal Asset Catalog (STAC)



Sentinel-1 SAR Imagery Retrieved using STAC over Commercial Forestry in RSA

Sentinel-1 SAR Analysis

Option 3: Esri SpatioTemporal Asset Catalog (STAC)



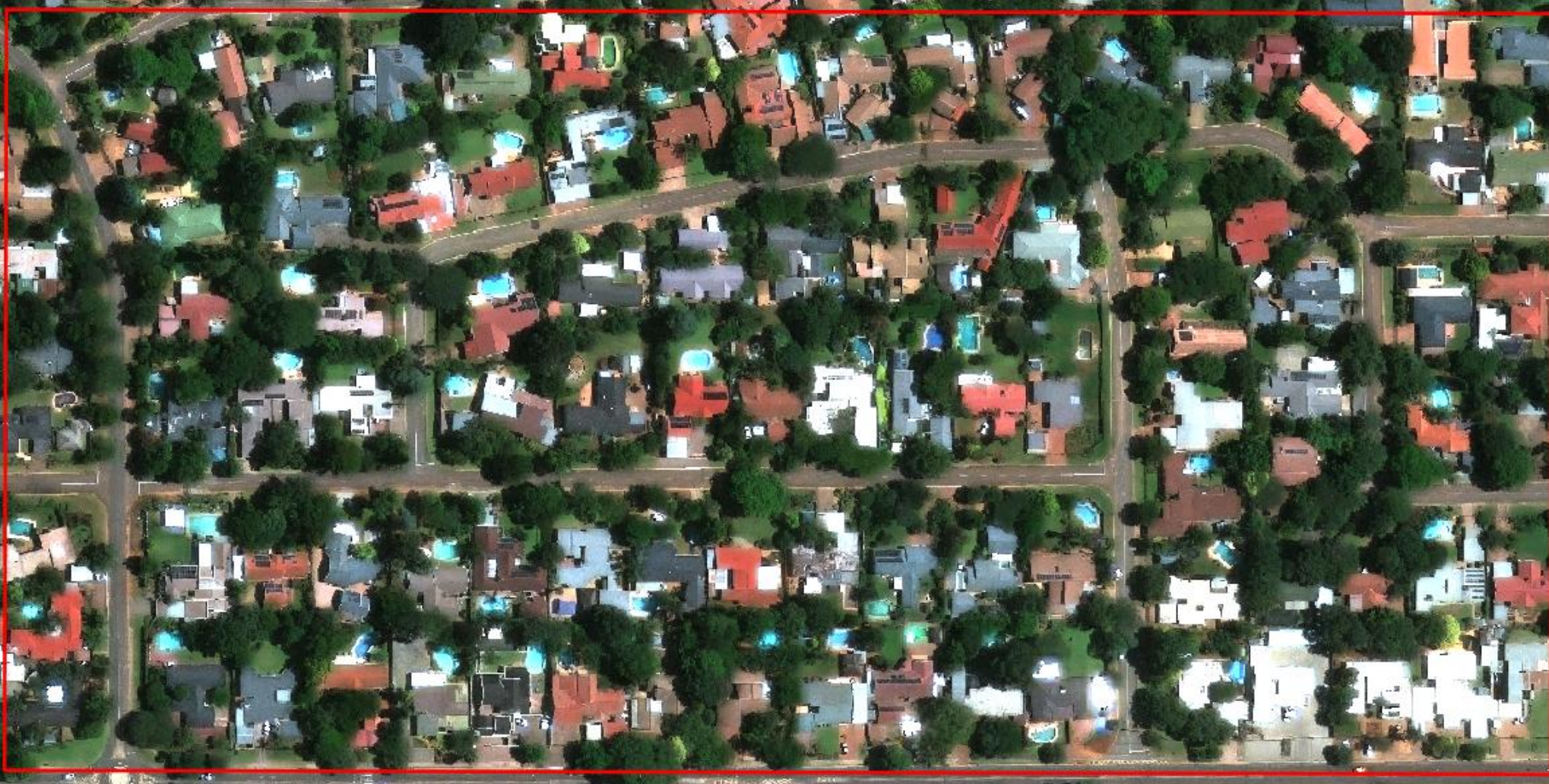
Harvesting = 30 Ha

Detected using Sentinel-1 SAR

Free Service

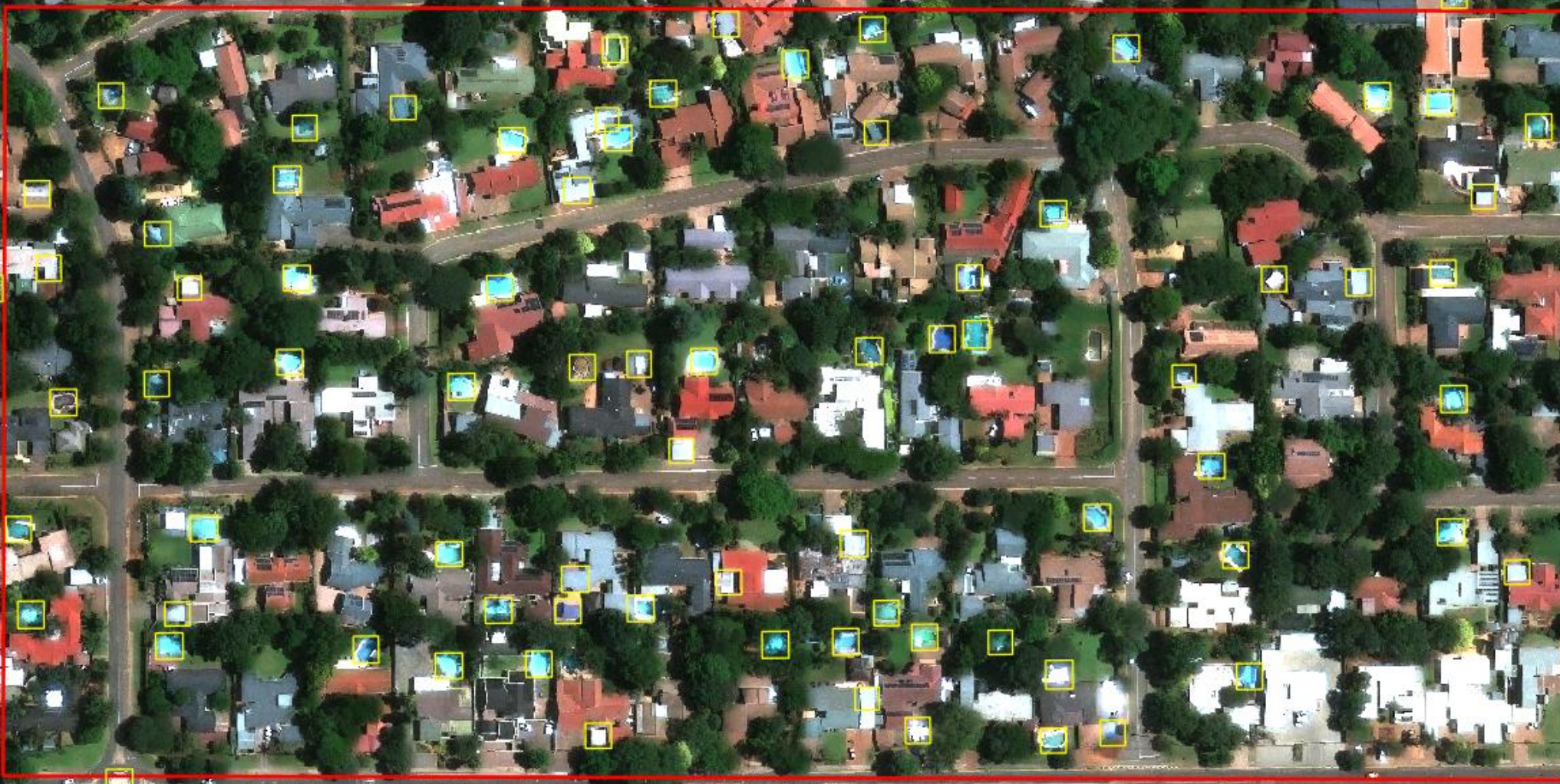
Off-the-Shelf Analysis

- Used MGP-Pro
- Downloaded 1sqkm 15cmHD RGB Satellite Image
- Make sure you reformat the imagery to match the predefined Esri deep learning modules (8-bit RGB)
- I used the Pool Detection and Tree Detection DL Modules



Off-the-Shelf Analysis

- Used MGP-Pro
- Downloaded 1sqkm 15cmHD RGB Satellite Image
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- Make sure you reformat the imagery to match the predefined Esri deep learning modules (8-bit RGB)
- I used the Pool Detection and Tree Detection DL Modules



Off-the-Shelf Analysis



Text SAM

Deep Learning Package By [esri_analytics](#)

Vision-language deep learning model to detect and segment objects using text prompts, enabling users to extract features from imagery without predefined classes. This model combines the capabilities of GroundingDINO and SAM to perform zero-shot detection and segmentation directly from natural...



Solar Panel Detection - New Zealand

Deep Learning Package By [eagleis](#)

New Zealand Solar Panel Deep Learning Package to detect Solar Panels in high resolution imagery.

Authoritative



Land Cover Classification (Sentinel-2)

Deep Learning Package By [esri_analytics](#)

Deep learning model to perform land cover classification on Sentinel-2 imagery.

Subscriber Authoritative

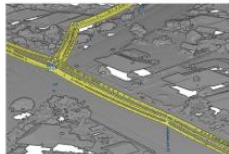


Windows and Doors Extraction

Deep Learning Package By [esri_analytics](#)

Deep learning model to extract windows and doors in building data displayed in 3D views.

Subscriber Authoritative



Power Line Classification

Deep Learning Package By [esri_analytics](#)

Deep learning model to classify point clouds into distribution wires, poles, or background.

Subscriber Authoritative



Road Extraction - Global (Legacy)

Deep Learning Package By [esri_analytics](#)

Deep learning model to extract roads from high resolution satellite imagery.

Subscriber Authoritative



Parcel Extraction - USA

Deep Learning Package By [esri_analytics](#)

Deep learning model to extract land parcels from high-resolution aerial and satellite imagery.

Subscriber Authoritative



Agricultural Field Delineation

Deep Learning Package By [esri_analytics](#)

Deep learning model to delineate agricultural fields using Sentinel-2 imagery.

Subscriber



Elephant Detection

Deep Learning Package By [esri_analytics](#)

Deep learning model to detect elephants in aerial imagery, supporting wildlife conservation, habitat monitoring, and anti-poaching initiatives. The model enables automated identification of elephants across large geographic areas, helping conservationists track populations, reduce human-wildlife...

Subscriber Authoritative



Swimming Pool Detection - New Zealand

Deep Learning Package By [eagleis](#)

New Zealand Deep learning model to detect swimming pools in high-resolution aerial or satellite imagery.

Authoritative

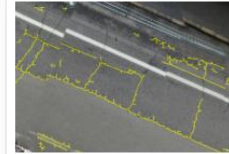


Building Footprint Extraction - USA

Deep Learning Package By [esri_analytics](#)

Deep learning model to extract building footprints from high-resolution aerial and satellite imagery.

Subscriber Authoritative



Pavement Crack Detection

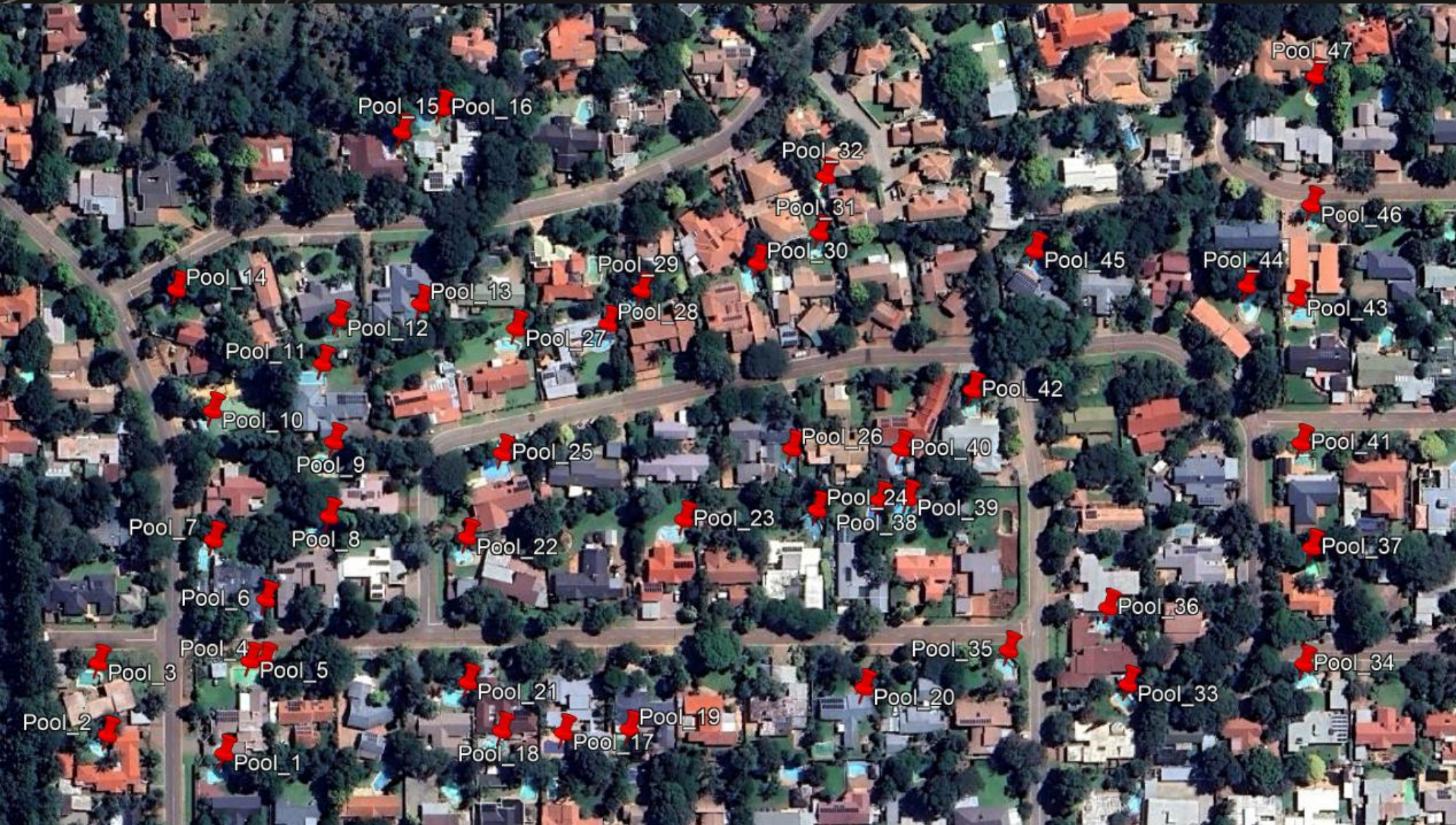
Deep Learning Package By [esri_analytics](#)

Computer vision model to detect pavement cracks in drone imagery

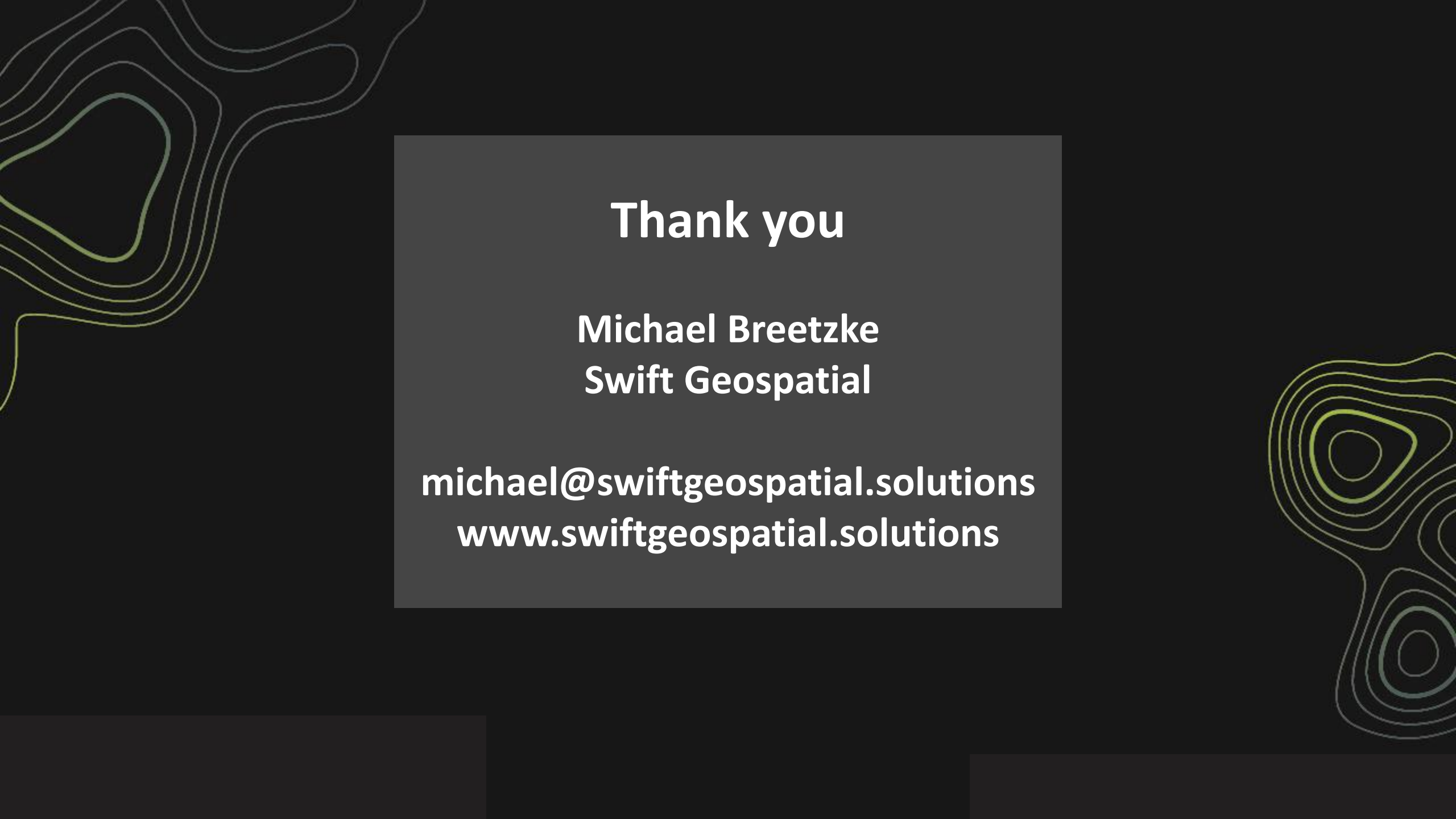
Subscriber Authoritative



ChatGPT Test



- **Grok**
- **Deepseek**
- **Esri AI Assistant**



Thank you

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**michael@swiftgeospatial.solutions
www.swiftgeospatial.solutions**