



# A Partner for Building and Running Geospatial Processing Workflows

With **ENVI® Agent**, simply describe the problem you want to solve and generate results without clicking buttons in ENVI. You're an active participant in the process and can guide decisions, refine outputs, or adjust direction to optimize results.

ENVI Agent can act on your behalf, but that doesn't mean you aren't a part of the process. It summarizes workflows before processing your data to make sure the analysis matches your intent. This enables you to do things you couldn't do before, move faster, and focus on results instead of managing the steps along the way.

## Articulate the Goal. Let ENVI Agent Handle the Rest.

What once required combing through documentation and struggling with trial-and-error configuration is now as simple as guiding the process—focusing on intent rather than mechanics.

## Simplify Complex Data

A significant portion of geospatial work happens before analysis can even start—it's in preparing and cleaning the data. ENVI Agent streamlines this process by standardizing workflows and dynamically adapting each step to the specific structure and quirks of your dataset.

## Solve Problems Like an Expert

When errors or problems are encountered, ENVI Agent is adaptable and solves issues or works around them to keep things moving.

**Burned Area Change Detection Workflow**

**Step 1: Calculate Normalized Burn Ratio (NBR) for Time 1 (ao3\_time1.dat)**

- NBR highlights burned areas using NIR and SWIR bands
- Formula:  $(NIR - SWIR) / (NIR + SWIR)$
- Uses bands: NIR (Band 4) and Red (Band 3) as proxy since true SWIR is not available

**Step 2: Calculate NBR for Time 2 (ao3\_time2.dat)**

- Same index calculation

**Step 3: Calculate NBR Difference (Time 2 - Time 1)**

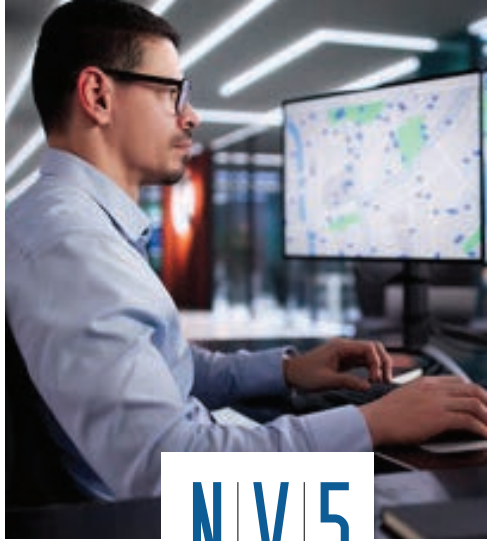
- Subtracts Time 1 NBR from Time 2 NBR
- Burned areas show negative values (NBR decreases after burning)

**Step 4: Apply Automatic Threshold Classification**

- Automatically identifies significant changes
- Creates a classified map showing: Decrease (burned areas), No Change, and Increase
- We'll focus on "Decrease" class for burned areas

**Output:** A classified change detection map showing burned areas

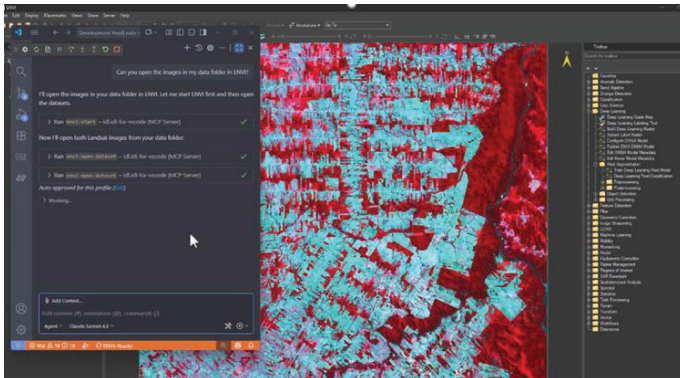
Does this workflow look good to you? Would you like me to proceed with



NV5 is the world's leading provider of geospatial software and services. From data acquisition to analytics to answers, we help organizations solve mission-critical challenges. Our geospatial experts are driven to help our clients enact meaningful change across their communities and the world.

## Transparent Decision Making

You have full control over what processing ENVI Agent runs. You can easily ask for changes to workflows, review proposed processing steps, and inject your own expertise.



## ENVI Agent Gives You the Power to Quickly:

- Open data in ENVI, run tools interactively
- Plan and execute remote sensing workflows
- Perform batch processing
- Represent workflows as IDL® code or IDL Notebooks
- Ask product questions about ENVI

## ENVI Agent: Example Questions:

- ✦ *“Can you help me plan a change detection workflow with this data?”*
- ✦ *“What ENVI tools do you have available?”*
- ✦ *“Can you open this data for me in ENVI?”*
- ✦ *“Using ENVI, how would I do supervised classification to map features from a spectral library?”*
- ✦ *“After running processing, can you summarize that workflow in an IDL Notebook for me?”*

Reach out to discuss how NV5 can help modernize your mission.

[NV5GeospatialSoftware.com](https://www.nv5.com/GeospatialSoftware.com) [✉ geospatialinfo@NV5.com](mailto:geospatialinfo@NV5.com)

