

New Approaches to Geospatial Analytics

Many organizations think geospatial analytics is the exclusive domain of GIS specialists with access to specialized GIS systems, but change is here. As the availability of third-party spatial data like satellite imagery has increased, organizations are beginning to understand the need to better leverage spatial analysis and incorporate it into their descriptive, predictive, and prescriptive workflows.

In today's complex multifaceted world, organizations of all types have come to rely on geospatial data — and geospatial analytics — to solve major societal, economic, and business problems. From minimizing the impact of natural disasters and planning public health initiatives, to optimizing infrastructure investments and to automating the creation of economic insight, geospatial data is playing an increasingly vital role.

Does your analytics platform address today's geospatial needs?

Today's geospatial analytics ecosystem is being shaped by a series of critical factors that organizations need to be prepared to address:

- The proliferation of data and the ready availability of data from commercial 3rd party sources
- The complexity in the disparate formats of data, requiring agility in the ability to ingest, prep and blend data for analysis
- A capability to integrate geospatial analytics with traditional and more advanced analysis like predictive analytics and machine learning
- The imperative to democratize technology and upskill existing resources
- The need for agility in reporting, visualization, and sharing

Forging a New Path for Geospatial Analytics

Instead of leveraging expensive GIS systems or having the inconvenience of moving data from multiple systems, many government organizations are streamlining and

unifying their geospatial analytics through Analytic Process Automation (APA). Alteryx unifies analytics, data science and process automation in one, end-to-end platform to accelerate digital transformation and rapidly upskill the modern workforce. The Alteryx APA Platform™ provides hundreds of automation building blocks for data prep and blending, diagnostic and predictive analytics, autoML, and code-free data science.

When a **State Medicaid organization** wanted to strengthen their response to the Opioid crisis they turned to Alteryx to conduct a geospatial analysis to measure and analyze how many SUD-related services were available within the state, and more importantly, how convenient these services were to those who needed them. In other words, were the needed services within easy driving distance for populations with SUD-related ailments? Additionally, they wanted to join this data with demographic information related to 2.8 million Medicaid subscribers, millions of lines of data related to specific claim types, 5.2 million residential housing locations, and over 300,000 service provider locations. With all this varied data, they wanted to create a geospatial analysis that would create a deep level of insight into the availability and distribution of SUD-related services and measure how convenient they were to Medicaid subscribers within the state.

At a **key U.S. agency**, Alteryx is deployed to automate the collection of data and analysis, including satellite imagery, to accelerate the production of economic indicators. The Alteryx Platform collects, filters, formats, and aggregates unstructured data from numerous Census and third-party sources. The data is ingested into the Alteryx APA Platform which, in turn, enables the creation and scheduling of workflows that can collect satellite imagery and automate analysis using geospatial and AI/ML capabilities to validate, compile, and create more accurate and timely construction indicator insight. Data utilized includes:

- Third-party U.S. permit data for residential single-family homes
- Web-scraped jurisdiction websites and PDFs
- Census shapefiles for every U.S. state
- Satellite images of construction sites show pre-construction and post-construction

When major hurricanes hit Puerto Rico, Atkins a FEMA contractor accelerated recovery efforts by using Alteryx to unify and deploy predictive modeling and geospatial analysis. In this scenario, actionable insight was created by analyzing weather and building construction data. The resulting insight helped disaster management teams predict where the greatest level of damage occurred, allowing them to prioritize those areas for physical inspection. This resulted in faster delivery of disaster recovery resources for the communities most in need.

Making Geospatial Analytics and Automation Available for Everyone

Built-in spatial analytics tools from Alteryx make geospatial analytics easier than you ever thought possible. Perform field service and resource optimization, asset location planning, transportation and logistics management, location-specific service delivery, and emergency response planning. The Alteryx no-code/low-code, self-service platform requires no specialized skillsets and is designed to put automation in the hands of all data workers; it can automate analytics and data science pipelines, manage complex data-centric business processes, and deliver actionable insights to stakeholders in every line of business. Thousands of organizations globally use Alteryx to deliver quick wins and high impact business and mission outcomes.

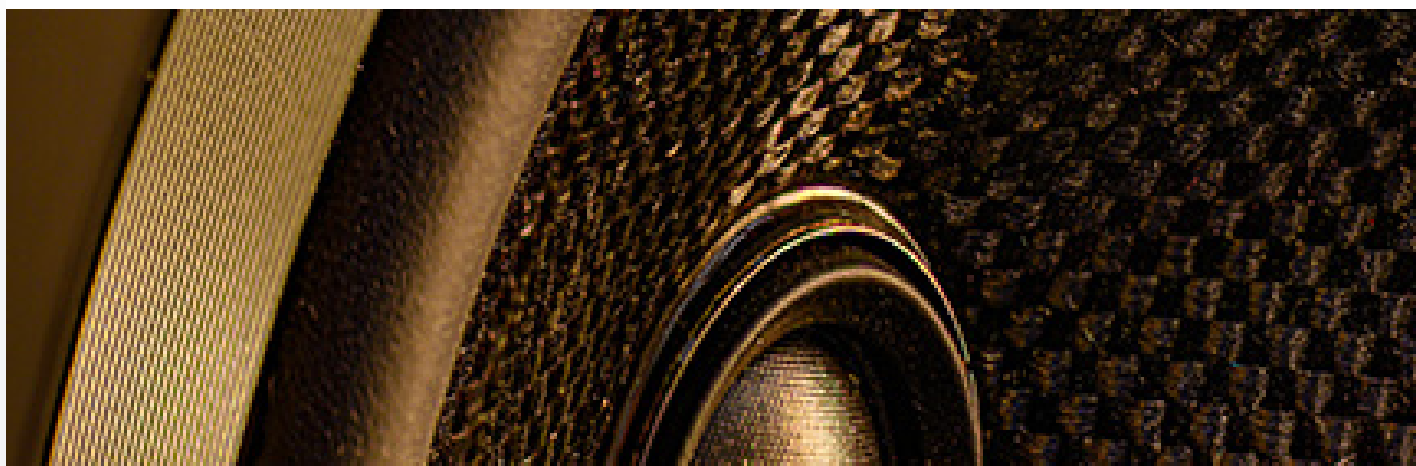
Going to 2021 GEOINT? Stop by the Carasoft Pavilion and see what Alteryx can do for your geospatial analytics.

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