

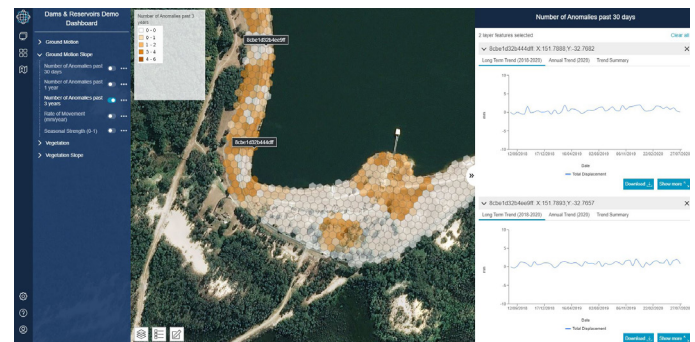
MONITOR THE INTEGRITY OF YOUR DAMS BASED ON MOVEMENT, VEGETATION AND SEEPAGE

Improve the frequency and accuracy of your dam monitoring with historic and ongoing satellite data

Access the power to know what you don't know with Rezatec's Dam Monitoring product. Regularly-refreshed satellite data combined with AI delivers accurate insights about your dam to help you improve efficiency and public safety.

Ageing Dams. New Risks.

As dams age, failure becomes a real threat to you and the communities you serve. Combine this with increasingly unpredictable weather and the need to level-up your risk management strategy becomes a necessity. Traditional methods of monitoring the structural integrity of dams, such as manual inspections, can be costly, time consuming, and unscalable. To truly understand your dam cost-effectively, you need advanced technology that delivers additional insights regularly, remotely and at scale.



Rezatec platform showing anomalous ground motion

Cover More Ground. Uncover More Data.

Rezatec's Dam Monitoring product remotely monitors structural movements and vegetation to identify changes to your dam before they become an issue. Geospatial data fused with advanced analytics provide frequent, accurate insights on changes in ground motion and vegetation across the length of each dam at scale. This gives you access to vital information on the structural integrity of your assets and potential seepage issues between routine inspections or surveys. And empowers you to deploy resources to the right place at the right time.

- Historic data enables retrospective analysis and identifies anomalies
- Build a complete risk profile with unique historical analysis to track changes
- Identify issues between surveys with millimetric ground motion monitoring and vegetation correlation (an indication of seepage)
- Reduce costs and improve public safety



Product Overview

Our Geospatial AI platform uses InSAR satellite radar data to monitor ground motion at the millimetric level, using a method called interferometry. The satellites cover the globe anywhere between every five to 12 days providing regular updates. Satellite derived optical data is used to monitor vegetation moisture and vigor, using an orthogonal index to compare these readings over time.

In order to better understand your dam, we begin by carrying out a retrospective analysis on three years of both the radar and optical data sets. The analysis cleans, processes and uses data science methods to translate the raw satellite data into insights across the whole dam using a system of interlocking hexagons. From this we can identify what is 'normal' dam movement or vegetation as well as any trends or seasonality at play across the different parts of your dam. When readings are outside this normal threshold they're highlighted as an anomaly.

While the retrospective information is useful to set this baseline of understanding, monthly updates using the satellite data from the intervening orbits provide ongoing monitoring benchmarked against this threshold. This ensures you can pick up millimetric changes out of the ordinary and give yourself time to investigate and take action before it becomes a bigger issue.

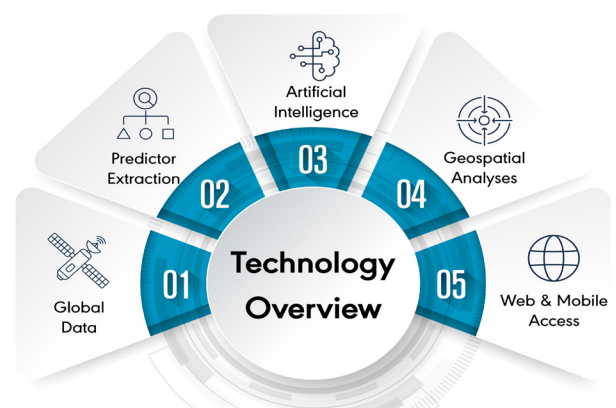
Geospatial AI

Geospatial AI combines historical and ongoing Earth Observation data collected by satellite and advanced algorithms to spot changes that signal potential threats to your infrastructure. These might occur in moisture, vegetation (a sign of seepage) or motion and can be detected down to the millimetre.



About Rezatec

Rezatec's Geospatial AI platform delivers new insights that empower you to manage your ground-based assets and critical infrastructure dynamically, efficiently and at scale. This means you can prioritize investment in the right place at the right time, boost the value of your assets and make informed decisions about resource deployment to super-charge productivity.



How our Geospatial AI works

CONTACT US TO FIND OUT MORE

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