

What is Geospatial Artificial Intelligence?

August 24, 2023 • vajiramandravi.com



About Geospatial Artificial Intelligence

- It is the application **of artificial intelligence (AI)** fused with **geospatial data, science, and technology**.
- It is used to accelerate real-world understanding of business opportunities, environmental impacts, and operational risks.
- It is transforming the speed at which we extract meaning from complex datasets, thereby aiding us in addressing the earth's most pressing challenges.
- **How does it work?**
 - With the help of simple smartphone applications, **people can give real-time feedback about the conditions in their surroundings**, for example, traffic congestion, the details of it, the peak hours, their experience of it, their rating: low, moderate, or dense.
 - The data is **then collated, sorted, analyzed** and it enhances its accuracy and precision because of thousands of users contributing to the database.

Why is GeoAI important?

- **Improve data quality, consistency, and accuracy:** Streamline manual data generation workflows by using the power of automation to **increase efficiency and reduce costs.**
- **Accelerate the time to situational awareness:** Monitor and analyze events, assets, and entities from sensors and sources such as video to enable quicker response times and proactive decisions.
- **Bring location intelligence to decision-making:** Make data-driven decisions with real-world awareness. Improve business outcomes with insight from spatial patterns and accurate predictions.

What is random forest technology?

- It is a **commonly-used machine learning algorithm** which combines the output of multiple data to arrive at a result.
- Researchers use historical **data collected from various air quality monitoring stations** in a city and apply the random forest algorithm to predict the Air Quality Index.

Q1) What is Geospatial mapping?

Geospatial mapping is a type of spatial analysis techniques that typically employs software capable of rendering maps processing spatial data, and applying analytical methods to terrestrial or geographic datasets, including the use of geographic information systems.

Source: [NIAS launches pilot project involving GEOAI and random forest tech to monitor air pollution in Bengaluru](#)

Source: <https://vajiramandravi.com/current-affairs/what-is-geospatial-artificial-intelligence/>

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