Use of Earth Observation to Strengthen Disaster Risk Management for Sustainable Development in Asia and the Pacific



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- Low altitude economy
- GeoAI

United Nations Office for Outer Space Affairs (UNOOSA)

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Vision

Bringing the benefits of space to humankind

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Mission Statement

Promote international cooperation in the peaceful uses of outer space to achieve sustainable development goals



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Current state of the EO for DRM

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Data

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Data Compute

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Data Compute GeoAI



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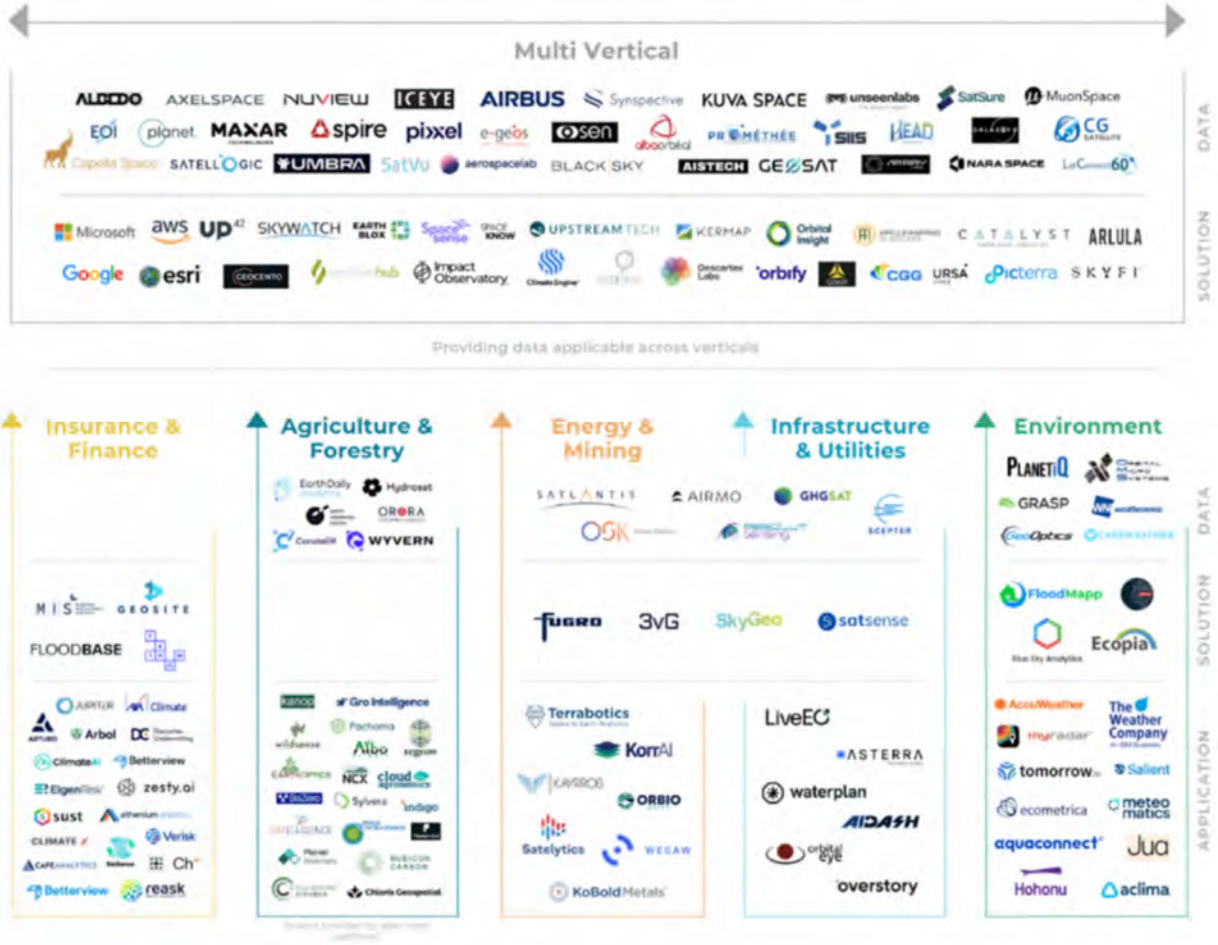
20 TB / day



50 TB / day

Earth Observation For Climate

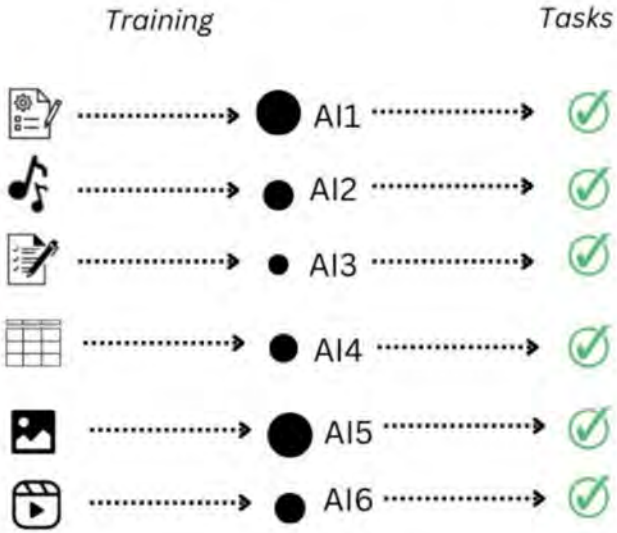
Commercial Landscape



70–100 exaFLOPS (aggregate global capacity).

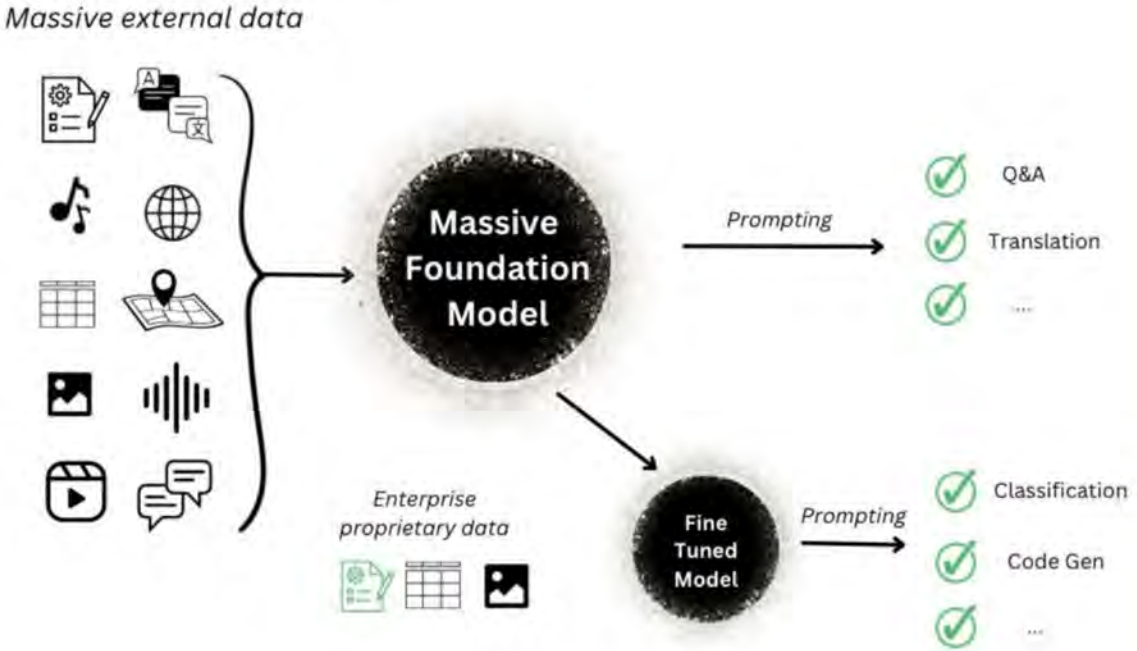

70–100 exaFLOPS
(aggregate global capacity).
IBM
MAXAR
esa
aws
Google Cloud
NASA
planet

Traditional ML



- Individual siloed models
- Require task-specific training
- Lots of human supervised training

Foundation Models



- Massive multi-tasking model
- Adaptable with little or no training
- Pre-trained unsupervised learning

Outlook

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change is coming

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LLM → **Geo Agents** → **AGI**

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LLM → **Geo Agents** → **AGI**

Large Language Models (LLMs) are advanced computer programs trained on vast amounts of text data to understand and generate human-like language. They can answer questions, write stories, translate languages, and assist with tasks by predicting the next words based on context. Think of them as very smart, digital assistants for **language-related tasks**.

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LLM → Geo Agents → AGI

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Agents are computer programs or tools designed to act on your behalf. They can perform specific tasks, make decisions, or respond to situations automatically based on the information they are given. Think of them as digital helpers that follow instructions to **get things done** for you.

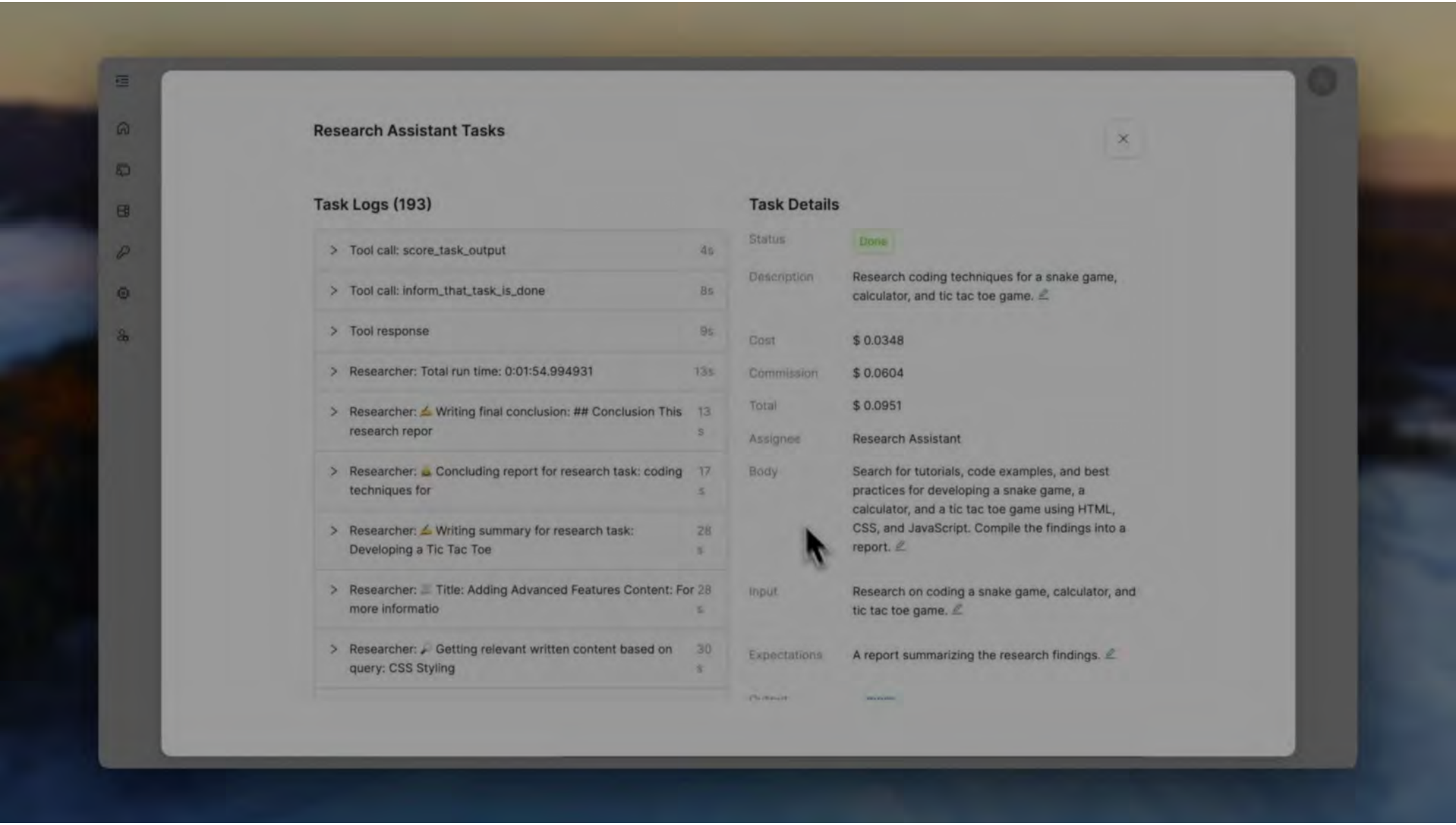
LLM

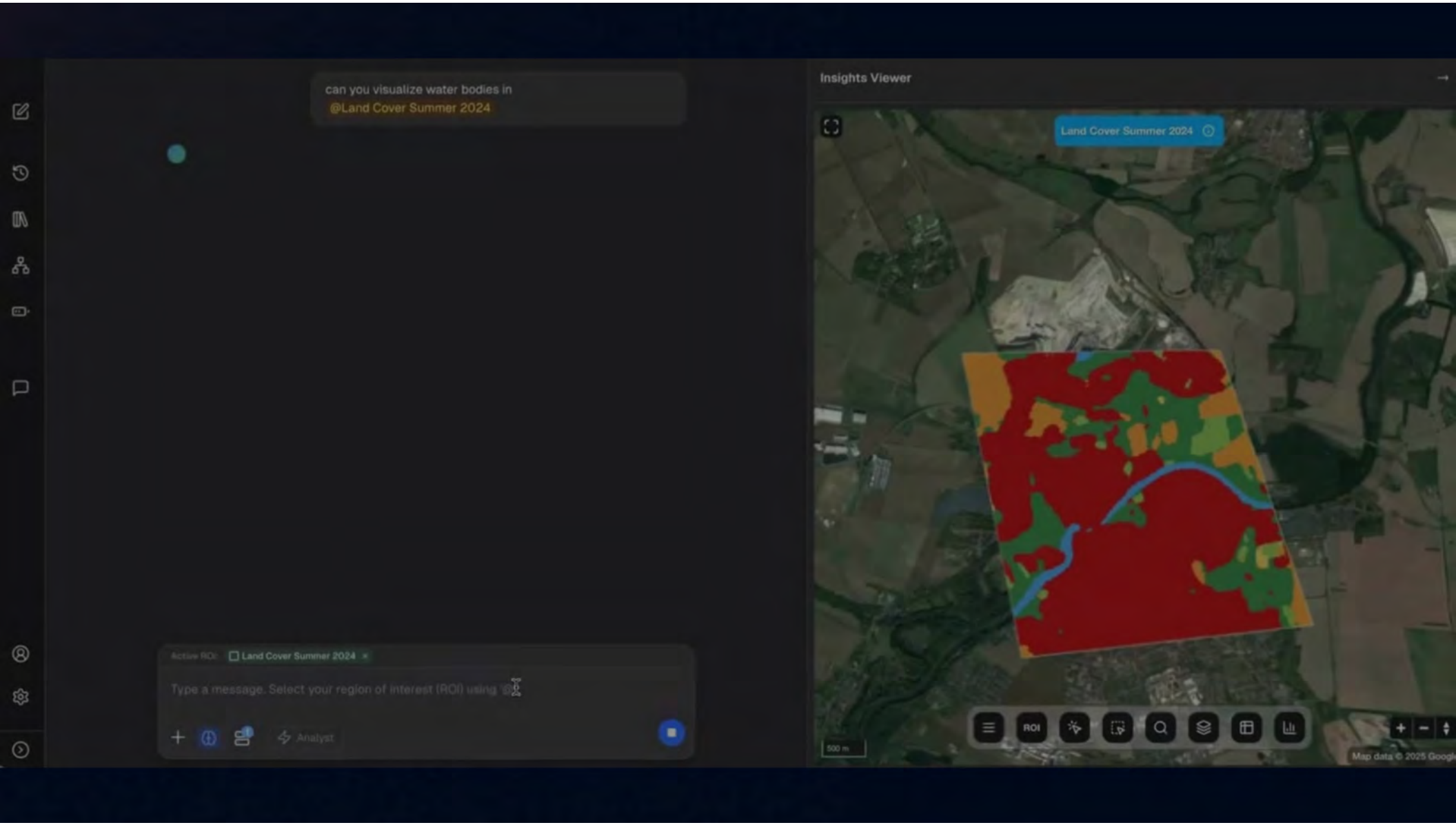


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Research Assistant Tasks
Task Logs (193)
Tool call: score_task_output 4s
Tool call: inform_that_task_is_done 8s
Tool response 9s
Researcher: Total run time: 0:01:54.994931 13s
Researcher: Writing final conclusion: ## Conclusion This research repor 13 s
Researcher: Concluding report for research task: coding techniques for 17 s
Researcher: Writing summary for research task: Developing a Tic Tac Toe 28 s
Researcher: Title: Adding Advanced Features Content: For more informatio 28 s
Researcher: Getting relevant written content based on query: CSS Styling 30 s
Task Details
Status Done
Description Research coding techniques for a snake game, calculator, and tic tac toe game.
Cost $ 0.0348
Commission $ 0.0604
Total $ 0.0951
Assignee Research Assistant
Body Search for tutorials, code examples, and best practices for developing a snake game, a calculator, and a tic tac toe game using HTML, CSS, and JavaScript. Compile the findings into a report.
Input Research on coding a snake game, calculator, and tic tac toe game.
Expectations A report summarizing the research findings.


can you visualize water bodies in
@Land Cover Summer 2024
Active ROI:
Land Cover Summer 2024
Type a message. Select your region of interest (ROI) using '@'
Analyst
Insights Viewer
Land Cover Summer 2024
ROI
500 m
Map data © 2025 Google

Low-Altitude Economy: The Missing Middle Layer

- Airspace 0–1 km AGL: drones, eVTOL air-taxis, HAPS balloons, direct-to-device LEO links
- Bridges ground sensors satellites real-time EO feeds for climate & disaster services
- Asia-Pacific drone market: US$49 B by 2030, 15.9 % CAGR
- APAC LEO broadband growing 50 % CAGR through 2030 (5 M+ global Starlink subs; Asia 0.77 M)

Fuel for Investment & Commercialisation

- EO value-add in Southeast Asia expected to triple: US$15 B US$45 B by 2030, unlocking US$100 B GDP
- Low-alt drones halve urban delivery times; 50+ commercial routes already active in China's pilot cities
- One ag-drone treats ≈ 67 ha day vs 1 ha manually —70× labour efficiency
- Disaster market pull: 146 M people hit by natural hazards in 2024—highest in five years

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