The democratization of planetary-scale geospatial analysis through cloud computing and massive parallelization

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The advent of cloud computing platforms puts the capacity for performing planetary-scale geospatial analyses into the hands of anyone with access to a web browser. Cloud-based geospatial analysis platforms potentially combine several services: access to data, programming interfaces for analyzing the data, and mechanisms for sharing the analyses and publishing results. This talk will describe examples of cloud-enabled geospatial analysis solutions, and provide examples of the types of analyses these systems support. Planetary-scale examples include the global monitoring of forest loss and gain, global surface water availability, and analyses of the global fishing fleet. On a more local scale, multiple sources of data can be combined and deep stacks of temporal imagery analyzed to estimate crop yield, malaria outbreak risk, and measure evapotranspiration. Each of the examples described will demonstrate how open access to large amounts of remotely sensed data can be analyzed without the need to download source data or manage large installations of servers.

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