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Sommario/riassunto   The amount of location data generated and models that are being developed is increasing quickly. Remote sensing provides exabytes of Earth observation data, sensor networks generate measurements with unprecedented velocity, social networks, autonomous cars, smart cities, and the Internet of Things (IoT) add to these collections. Traditionally, geospatial data management is based on curating datasets and catalogue services which provide the ability to filter datasets based on size, location, and thematic focus. For example, the Worldview-3 satellite observes the world at a resolution of 31cm per pixel, which translates into 10.4 million pixels per km2, and covers 680, 000km2 a day1 resulting in more than 7 trillion pixels per day. Our ability to develop models that can recognize objects on a given image has improved tremendously in the last decade, allowing us to monitor a region to detect flooding, or forest fires using high resolution imagery and videos collected by UAVs. A limiting factor for such approaches is that it is difficult to search the huge collections for interesting patterns. Not only does one need to know where to look to find objects of interest but also what model to use for such a task? What if a forest fire breaks out in an area that is not monitored? What if prior efforts had already created models on an exact or very similar task? How should users search for such models? When models are available how should they be stored? Many applications become

possible if we manage to make data collections and models searchable by content, metadata and application tasks. Application users would like to solve such challenges knowing which model to use, which task is the model relevant for and finding all objects of a certain type in a huge data cube or a large point cloud. And users will want to be able to search broadly, interactively, fast and using different or even mixed modalities. For example, you want to search using a text query and retrieve images from a satellite data collection, retrieve models from a database of existing models. Similarly, you want to search with an image for locations on Earth that have a certain similarity. You want to monitor broad areas to rapidly identify changes like emergencies or disasters to alert and guide rescue teams. When you are on the go, you might want to search with audio description of what you aim to find and you want to search across all geospatial data representations (vector, raster, text, object, fields, etc.).