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Sentinelflow automated satellite image workflow for Sentinel-2

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Soon after its launch on 23d of June 2015, the European Space Agency Copernicus Programme Earth observation satellite Sentinel-2A began delivering 10-metre resolution public imagery over all continents. On the 7th March 2017 a second satellite Sentinel-2B was launch reducing repeat cycle to 5 days over the equator and less at high latitudes. The data are available in near-real time to registered users via an interactive web interface and an application programming interface.

Sentinelflow is a bash script that automatizes online query, download and assembly of Sentinel-2 satellite imagery into visually appealing colour images adapted for the human eye. Online query is performed based on point or rectangular coordinate intersect and an optional cloud cover threshold. Only requested tiles of 100x100 km are downloaded allowing to fetch only parts of the data products distributed via the web interface. Colours bands are combined after applying gamma curves that mimic human vision and correcting for atmospheric blue cast. Finally, tiles are patched and resized to produce georeferenced images matching user-specified extent and resolution.