

19F0228

Muhammad Zain

Remote Sensing

Five Most Influential Satellites

Name	Description	Launch Date	Temporal Resolution	Spectral Resolution	Spatial Resolution
MODIS	MODIS is a key instrument aboard both NASA's Terra and Aqua satellites. It provides global coverage of the Earth's land, oceans, and atmosphere at moderate spatial and spectral resolutions. MODIS data is used for a wide range of applications, including land cover mapping, atmospheric monitoring, and tracking natural disasters such as wildfires and hurricanes.	December 1999	One to two days	36	250-1000 m
Sentinel-2	Sentinel-2 is a European Space Agency (ESA) mission that provides high-resolution optical imagery of the Earth's land surfaces. The mission was launched as part of the Copernicus program, a joint initiative between the ESA and the European Commission to provide comprehensive and timely environmental data for Europe and the world. Sentinel-2 data is used for applications such as crop monitoring, land use change	June 2015	5 days	13	10-60 m

	detection, and disaster response.				
Landsat-8	Landsat-8 is the latest satellite in the Landsat program, a joint program between NASA and the US Geological Survey (USGS) to provide long-term monitoring of the Earth's land surfaces. Landsat-8 data is used for a wide range of applications, including land cover mapping, urban planning, and water resource management. Landsat-8 is equipped with advanced sensors that allow it to capture high-quality imagery in various spectral bands.	February 2013	16 days	9	15-100 m
ASTER	ASTER is an instrument aboard NASA's Terra satellite that provides high-resolution imagery of the Earth's land surfaces in both visible and thermal infrared wavelengths. ASTER data is used for applications such as geologic mapping, land cover classification, and natural hazard assessment. ASTER's unique combination of visible and thermal sensors allows it to capture detailed information about the Earth's surface temperature and composition.	December 1999	16 days	14	15-90 m
SMOS	SMOS is an ESA mission that provides global maps of soil moisture and ocean salinity using a passive	November 2009	3 days		40 km

	radiometer to measure microwave radiation emitted by the Earth's surface. SMOS data is used for applications such as weather forecasting, agriculture, and climate change monitoring. SMOS is unique in its ability to capture information about soil moisture and ocean salinity, which are important indicators of the Earth's water cycle.				
--	---	--	--	--	--