**DAILY LEARNING DAY 5:**

1. DATUM:

* It is a model for Earth’s surface.
* It has angular unit which is degrees as it is measured in degrees.
* It defines the origin used to place the coordinate system in space.
* It also defines the size of the Earth.
* It serves as a reference point for calculating geographic coordinates (latitude, longitude, and elevation).

1. PROJECTION:

* It is a mathematical method for transforming the Earth's curved, three-dimensional surface into a flat, two-dimensional map.
* The units are linear can be feet or meters.
* It allows us to represent locations on the Earth's surface on a map, which is easier to use and interpret.
* Projections helps in managing the distortions caused while representing the Earth’s surface on a flat surface.
* It has components namely- mathematical formulas, datum, and parameters like central meridian.

1. WHY MULTICLASS CLASSIFICATION MODEL IS BEST:

* Iris, is a classic dataset for multi class classification and built in dataset present in sklearn library of Python.
* The goal of multi class classification is to classify input data into one from three or more classes.

1. CLOUD COVERAGE:

* In the context of lidar, it refers to the presence of clouds in the sky that can potentially affect the accuracy and quality of LiDAR measurements.
* LiDAR technology relies on laser pulses to map the surface, cloud coverage can interfere with the signals, leading to lower-quality data or errors in measurement.
* The approaches to reduce the effects of cloud coverage on LiDAR data:

1. **Data Acquisition Scheduling**: Choosing times of day or specific weather conditions when cloud coverage is minimal (clear or partly cloudy).
2. **Higher Altitude Flights**: In some cases, flying at a higher altitude can minimize the effects of cloud coverage by allowing LiDAR sensors to capture data from above the clouds.