

Project Objective:-

Classify Cow's activities into 9 categories based on Data collected from IMU SENSORS

Data

IMU Data (Accelerometer, Gyroscope, Magnetometer)

What is IMU?

Inertial measurement unit, used to describe a collection of measurement tools, when installed in some device, catches movement with the help of accelerometer, gyroscope and magnetometer, in 3d space.

Variable names:-

acc_x,acc_y,acc_z: accelerometer output for all 3 dimensions movement.

gyr_x,gyr_y,gyr_z: gyroscope outputs, it measures rotation, rotation rate (angular velocity).

mag_x,mag_y,mag_z: magnetometer outputs, catches magnetic field around the device.

All three (Acc, Gyr, Mag) gives output in different SI Units i.e The scale for all three are different, so Data must be normalized

Classes and their Encoded values:-

eating = 1

drinking = 2

walking = 3

standing = 4

lying = 5

ruminating standing = 6

ruminating lying = 7

grooming = 8

idle/other = 9