

Abstract

Maneuvers are fast movements performed by every driver of a four-wheeled or two-wheeled vehicle. A person's driving behavior can be determined based on the inclination of the two-wheeled vehicle when maneuvering. The number of two-wheeled vehicle riders is negligent when maneuvering such as not paying attention to body position and position of two-wheeled vehicles, adding and subtracting accelerations and glancing to see blind spots can result in single accidents to accidents that can harm other vehicle drivers. Thus, the idea was obtained to design a tool for detecting the behavior of two-wheeled vehicle riders based on the inclination of the two-wheeled vehicle when maneuvering. The design of this system can transmit signal data from maneuver movements by analyzing the results of the rider's slope when maneuvering. By using this tool, it is known the behavior of two-wheeled vehicle drivers when maneuvering right or left. The test results show the amount of roll angle of the two-wheeled vehicle when maneuvering. So that it can be analyzed the behavior of two-wheeled vehicle drivers normally and or aggressively. Driver data when driving a two-wheeled vehicle, is stored in a micro SD Card and can display graphic plots and 3D visualization of the movement of two-wheeled vehicles riders on a personal computer.

Keywords : Maneuver, IMU Signal Processing, MadgwickFilterAHRS