1. Control Commands

Topic	Message Type	Purpose
/ackermann_cmd	ackermann_msgs/AckermannDriveStamped	Send steering angle, speed, and acceleration commands.
/cmd_vel	geometry_msgs/Twist	Alternative for basic velocity control (simpler but less detailed than Ackermann messages).

2. Feedback/State

Topic	Message Type	Purpose
/ackermann_state	ackermann_msgs/AckermannDriveStamped	Feedback on the current steering angle, speed, and acceleration.
/odom	nav_msgs/Odometry	Odometry data (position, orientation, velocity).
/joint_states	sensor_msgs/JointState	Feedback from steering/drive joints (e.g., wheel angles, motor RPM).

3. Sensor Data

Topic	Message Type	Purpose
/imu/data	sensor_msgs/Imu	Inertial Measurement Unit (IMU) data (orientation, angular velocity, linear acceleration).
/gps/fix	sensor_msgs/NavSatFix	GPS coordinates (latitude, longitude, altitude).
/scan	sensor_msgs/LaserScan	LIDAR or depth sensor data for obstacle detection.

4. Diagnostics

Topic	Message Type	Purpose
/diagnostics	diagnostic_msgs/DiagnosticArray	System health (battery, motor temperature, errors).
/battery_state	sensor_msgs/BatteryState	Battery voltage, charge level.

5. Simulation/Visualization

Topic	Message Type	Purpose
/tf	tf2_msgs/TFMessage	Transform tree for robot joints and sensors.
/move_base_simple/goal	geometry_msgs/PoseStamped	Navigation goals (used with ROS navigation stack).
/visualization_marker	visualization_msgs/Marker	Visualize paths, obstacles, or waypoints in RViz.