



Robotics Nanodegree: Introduction to Robotics

Robot Definition

A machine capable of carrying out a complex series of actions automatically especially one programmable by a computer.

Essential Elements of Robotics

- Perception → Sense
 - Decision-Making → Think
 - Action → Act
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Gazebo World What is Gazebo?

Gazebo is a physics-based, high fidelity 3D simulator for robotics. Gazebo provides the ability to accurately simulate one or more robots in complex indoor and outdoor environments filled with static and dynamic objects, realistic lighting, and programmable interactions.

Gazebo Features

- Dynamics Simulation
- Advanced 3D Graphics
- SensorsPlugins
- Model Database
- Socket-Based Communication
- Cloud Simulation
- Command Line Tools

Gazebo Components

- Gazebo Server
- Gazebo Client
- World Files
- Model Files
- Environment Variables
- Plugins