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# Sensing

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Estimated time to completion: **1 minute**

## 6.1 Introduction

Welcome to **Unit 6: Sensing!** Now that your robot can move in the simulation, it's time to give it **perception capabilities** by adding sensors.

In this unit, you'll learn how to equip your robot with essential sensing tools, including:

- A **LiDAR** plugin for detecting obstacles and mapping the environment.
- A **camera** to capture visual data from the simulated world.
- An **IMU** (Inertial Measurement Unit) sensor to provide orientation and movement data.

By the end of this unit, your robot will be able to perceive its surroundings, an essential step for tasks like navigation, object detection, and localization. Let's get started!



16/11/2023