

Week 3 - Vision

Vision is perhaps the most powerful sense in humans, providing a huge amount of information about the environment, and enabling rich and intelligent interaction.

In this module, we present the fundamentals of computer vision and image processing for a locomotion task: the robot will follow a line on the ground using a camera.



- [Acquiring Images \(Acquiring%20Images.ipynb\)](#)
- [Image Processing \(Image%20Processing.ipynb\)](#)
- [Line Detection \(Line%20Detection.ipynb\)](#)
- [Line Following \(Line%20Following.ipynb\)](#)
- [Line Following with Obstacle Avoidance \(Line%20Following%20Obstacle.ipynb\)](#)

This module is based on Chapter 12 (Follow-Bot) of **Programming Robots with ROS** by Morgan Quigley, Brian Gerkey, and William D. Smart (http://wiki.ros.org/Books/Programming_Robots_with_ROS).

Try-a-Bot: an open source guide for robot programming

Developed by:



(<http://robinlab.uji.es>)

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