4tronix bit:bot makecode starter guide

This is the third part of our tutorial, and assumes that you've already completed Part 1 and Part 2. We'll be adding to the **forever** block, so that it repeats endlessly. If you deleted the **forever** block, you can find it by searching at the top of the command categories.

In this tutorial, you'll learn how to:
1. Read top light sensors on the Bitbot
2. Use data from the light sensors to drive the motors to follow a light source, in the dark

You can find the finished code for this project at https://makecode.microbit.org/_1xUCchbqR8ft

Create variables to store data from the light sensors

❏ As in Part 2, we'll need to create variables to store data from the light sensors, so that it doesn't change during each repetition of our loop. Create two variables, and call them **right light sensor** and **left light sensor**.

❏ From the **Variables** category, drag two of the the **set..to** blocks into the **forever** block.
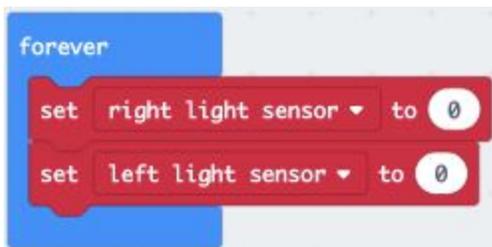
❏ From the Bitbot > Sensors category, drag across the light sensor blocks and set them to match the variable sides as shown.

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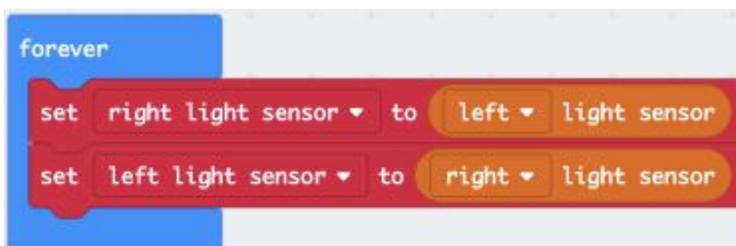
Use light sensor data to set motor speeds

❏ From the Bitbot command category, drag the drive..motor(s)..at blocks into the forever loop.
❏ Since we want the right motor to run when the left light sensor sees light, and vice versa, we need to set each motor's speed with the opposite side sensor value.
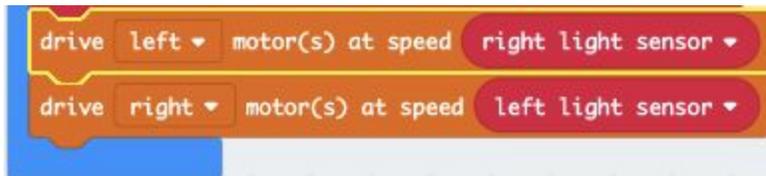
The finished code

The completed working code looks like this:
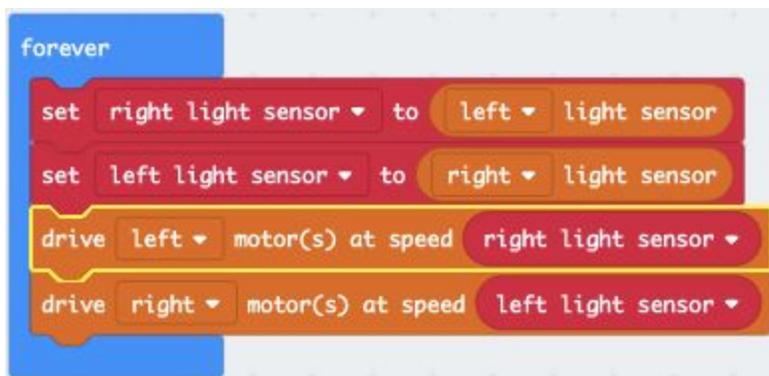
Loading and running this code on your Bitbot will make it:
1. Read the brightness data from the top light sensors
2. Drive the motors using the opposite light sensor's brightness data, so that the Bitbot follows a light source. You'll need to run this in the dark, using a torch to shine down on the Bitbot sensors, for best results.