

EV3 Line Follower Robot – Basic Concepts

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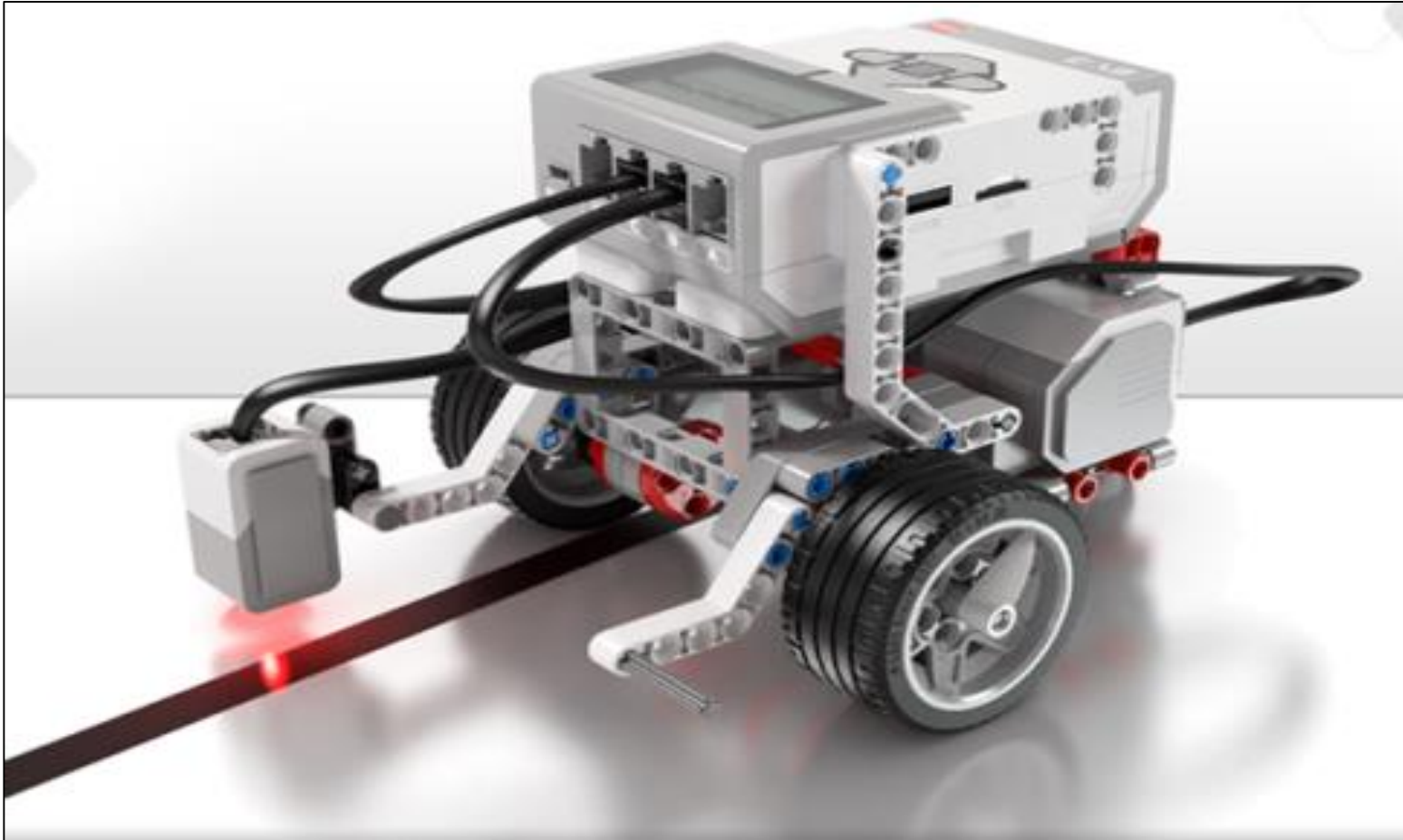
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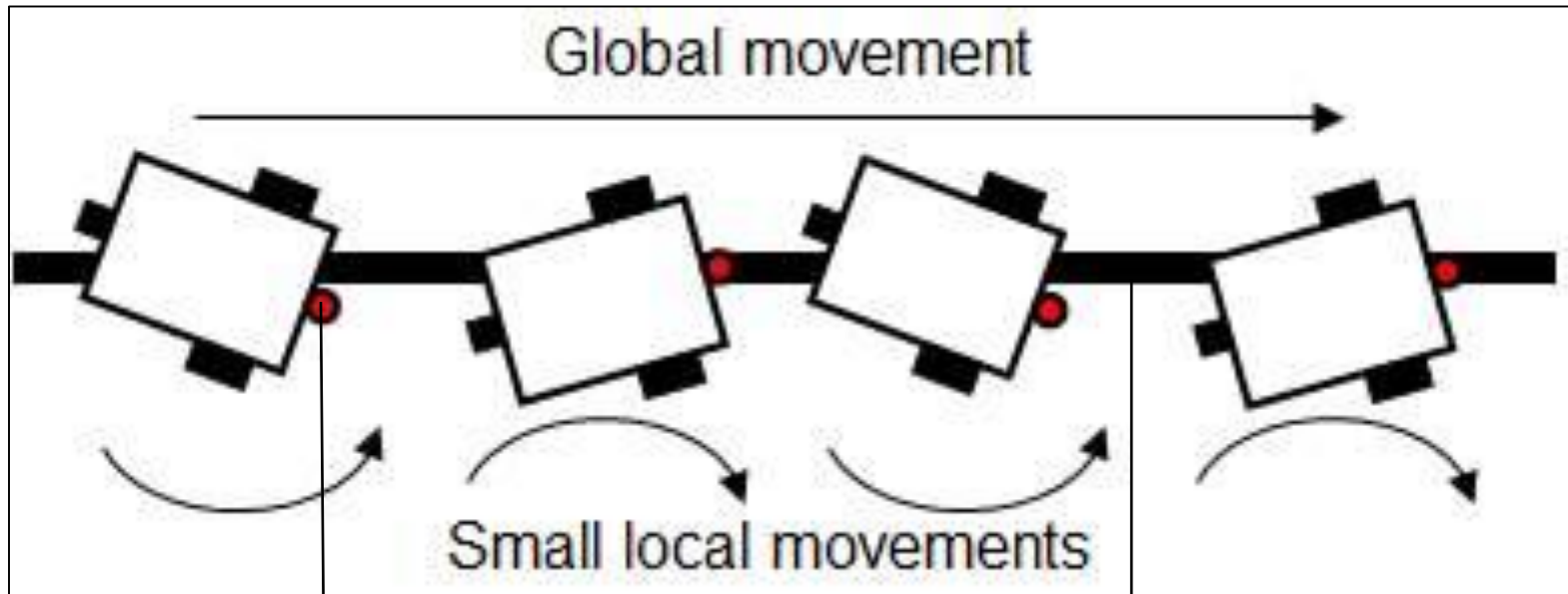
What is a Line Follower Robot



An autonomous robot which follows or tracks a line



Line Follower - Principles of Operation



Light or IR Sensor (detects dark and bright color on mat)

Line which needs to be followed by the robot

- Only one Light or IR Sensor is used
- Robot follows the edge of the line

Reference: <http://www.legoengineering.com>



Line Follower – Logic and Procedure

```
threshold = 40;
while (true) {
    if (SensorValue[light] < threshold) {
        motor[left] = 30;
        motor[right] = 0;
    }
    else {
        motor[left] = 0;
        motor[right] = 30;
    }
}
```

Turn the left motor on
and the right motor off

Turn the right motor on
and the left motor off

Reference: <http://nebomusic.net/>

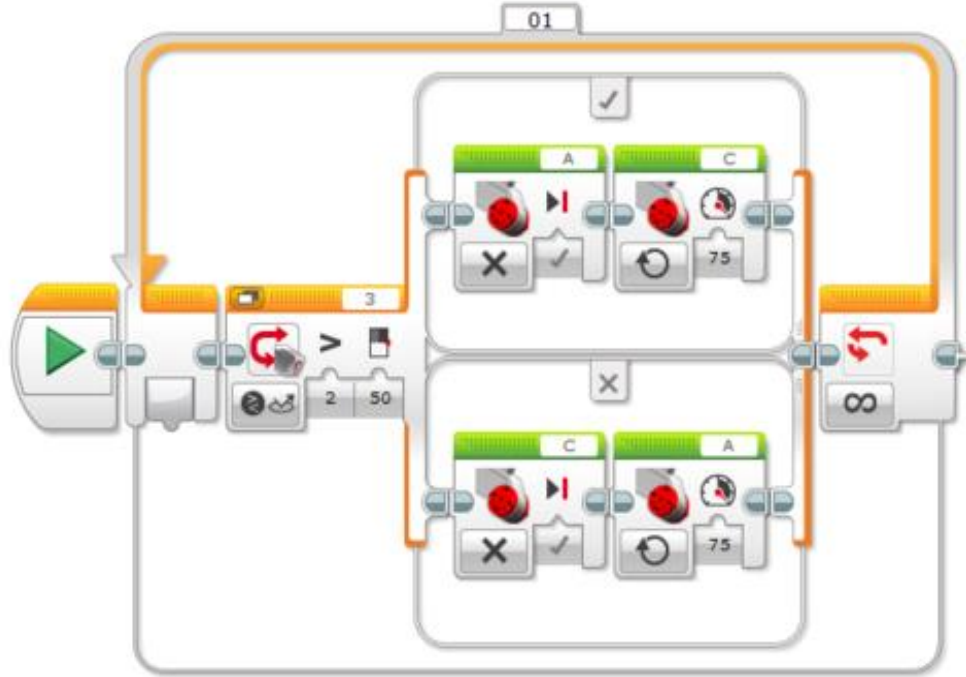
Light sensor read values from
the reflected light

When the values read dark,
direct the robot to turn right

When the values read light,
direct the robot to turn left

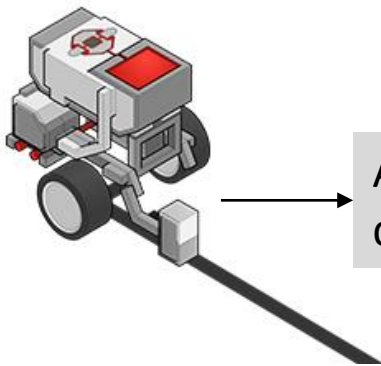


Line Following Code Using One Light Sensor



Left motor (motor A) stops while the right motor (motor C) starts turning

Right motor (motor C) stops while the left motor (motor A) starts turning



Attach the light sensor so that it points down – down placement

Reference: <https://manual.eg.poly.edu/>

