DOUBLE SENSOR LINE FOLLOWER
Two Sensor Line Following

- One sensor on each side of line
- Why two sensors?
  - Detect intersections
  - Detect turn indicators
- Simple approach...

<table>
<thead>
<tr>
<th>Left Sensor</th>
<th>Right Sensor</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>White</td>
<td>Turn Left</td>
</tr>
<tr>
<td>White</td>
<td>Black</td>
<td>Turn Right</td>
</tr>
<tr>
<td>White</td>
<td>White</td>
<td>Go Straight</td>
</tr>
<tr>
<td>Black</td>
<td>Black</td>
<td>Intersection, Go Straight</td>
</tr>
</tbody>
</table>
Two Sensor Line Following

• Better approach
  – Calculate difference between Left and Right sensor (use Math block)
  – Check result using a Compare block
  – Everything else is the same as a single sensor!
2 States Algorithm
(Single vs Double Sensors)

These are the same

These are the same
3 States Algorithm

- Store result of comparison in a variable
- Use compare blocks to check values
Tips and Challenges

- Store results in variables to avoid reading the sensors multiple times
- As your program gets larger, use My Blocks to keep it organized
- Try a 5 States Algorithm or a Proportional Control
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