

ASSIGNMENT 1

Line Following Robot in Industrial Application

Task 1:

Investigate the “Line Following Robot in Industrial Application” by reading **FIVE (5)** articles (website/technical paper) and do a conclusion.

Task 2:

You have a robot with capable for line following. The surface for line following robot is **WHITE** and a line to follow is **BLACK**. You have four (4) sensors, assuming the outputs are 1 when passing through **BLACK** line and 0 when on the surface. The robot will drive by two (2) motors. The motor will stop when logic 0 is given and running when logic 1 is given. Assume your motors will turn in one direction **ONLY**.

1. Design your own sensor placement
2. Create your truth table
3. Get the Boolean algebra from 1)
4. Simplify from 2) using Boolean rule and Karnaugh Map
5. Draw your possible logic diagram by using **ONLY AND, OR and NOT** gates.

Guidelines

Task 1:

Conclusion – *1 Page*

Task 2:

Introduction to Line Following Robot – *1 Page*

Basic Concept of Your Line Following Robot – *1 Page*

Solution – *Max 3 Pages*

Discussion and Conclusion – *1 Page*

Format

Font: Times New Roman

Spacing: 1.5

Maximum Page: 7

Due Date

24 October 2019