SC42050 Literature Assignment
Neural Control System of a Mobile Robot

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Description

This assignment concerns the application of neural networks for control of a mobile robot (Harb et al., 2008).

Questions

1. What problems are addressed in the paper?

2. Do a small literature study of the addressed problems. Show some approaches that have been used to solve the problems you find in Question 1.

3. How the neural networks are used in the paper? What kind of neural networks are used? Is it possible to use other kind of neural networks to solve these problems? Elaborate your answer.

4. Compare the approaches you have found in the literature study with the approach in the paper. For example, you can compare the ease of implementation and computation load, or you can also use other criteria you can think of.

5. In the course you have learned about fuzzy logic and reinforcement learning. Do you think you can also use those approaches to solve the problems in the paper? Explain why they can or cannot be used.

References

Harb, M., Abielmona, R., Petriu, E., and Naji, K. (2008). Neural control system of a mobile robot. In *Proceedings of the IEEE International Joint Conference on Neural Networks (IJCNN)*, pages 2825–2832.