Localisation: Where Am I?

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Contents

1 Introduction

2 Background

Localisation prblem definition. Approaches to localisation

2.1 Kalman Filters

Describe how Kalman Filters work, and why they are used for localisation. Discuss the drawbacks of Kalman Filters and how EKF can help resolve some of these issues.

2.2 Particle Filters

Describe what a particle filter is and how it works. Why are particle filters useful for localisation?

2.3 Comparison & Model Selection

Compare the two approaches and determine which approach was implemented to provide localisation for the two robot models.

3 Simulations

Describe the performance of the robots. Show the two robot model designs, highlighting the placement of sensors, and the sensors that were employed for the robot.

3.1 Achievements

3.2 Benchmark Model

3.2.1 Model Design

the size of the robot, the layout of the sensors - use a chart or a table

3.2.2 Packages Used

3.2.3 Parameters

3.3 Personal Model

4 Results

4.1 Localisation

4.2 Technical Comparison

5 Discussion

5.1 Topics

6 Conculsion / Future Work

6.1 Modifications for Improvement

6.2 Hardward Deployment