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A dissertation presented in part fulfilment of the requirements of the
Degree of Master of Science at The University of Glasgow

Date of submission placed here

Abstract

abstract goes here

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Acknowledgements

acknowledgements go here sdfsf

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Chapter 1

Introduction

1.1 Context

1.2 Problem Objectives

1.3 Problem Statement

1.4 Application/ Motivation

1.5 Outline of the dissertation

Chapter 2

Background Literature Survey

Divide into hardware and software/implementation technology Do I need to discuss things I haven't used Existing/similar applications

2.1 Papers? - if required

2.2 ROS

2.3 Turtlebot

2.4 Cameras

2.4.1 RGB-D

2.4.2 Stereo

2.5 SLAM

2.5.1 RtabMap

2.5.2 Others

2.6 Frontier Exploration

2.7 Object Detection

2.7.1 Feature Detection

2.7.2 Tensorflow

2.7.3 Haar Cascades

2.7.4 Google Vision API

2.7.5 3D Detection

Chapter 3

Requirements

Chapter 4

System Design

Chapter 5

System Implementation

5.1 Mapping

5.1.1 Transforming data

5.1.2 Calibration

5.2 Frontier Exploration

5.3 Object Detection and Recognition

5.3.1 Blob Detection

5.3.2 Detecting Clusters - different methods

5.3.3 Creating Boxes

5.3.4 Tracking Boxes

5.3.5 Positioning Boxes in Map/Loop Closure

5.3.6 Recognising Objects

5.3.7 Publishing to Rviz/Rtabmap

5.4 The whole package - how to utilise

Chapter 6

Evaluation

6.1 Testing

Chapter 7

Conclusion

7.0.1 Future work

Appendix A

First appendix

A.1 Section of first appendix

Appendix B

Second appendix

Bibliography