Deep Reinforcement Learning for Octree-Based Robotic Grasping

Learning Manipulation from 3D Observations

Andrej Orsula
Robotics

Master's Thesis

Copyright © Aalborg University 2021

Department of Electronic Systems
Aalborg University
https://www.aau.dk

AALBORG UNIVERSITY
STUDENT REPORT

Title:
Deep Reinforcement Learning
for Octree-Based Robotic Grasping

Theme:
Master's Thesis

Programme:
Robotics

Author:
Andrej Orsula[1]

Supervisor:
Simon Bøgh

Number of Pages:
20

Submission Date:
April 8, 2021

Abstract:

TODO: Abstract

[1]aorsul16@student.aau.dk

Contents

Resumé 4

Preface 5

1 Introduction 6

2 Related Work 7

3 Background 8

4 Model-Free Reinforcement Learning 9

5 Problem Formulation 10

6 Network Architecture 11

7 Simulation Environment 12

8 Experimental Setup 13

9 Results 14

10 Ablation Studies 15

11 Discussion 16

12 Conclusion 17

13 Future Work 18

Bibliography 19

A Dataset 20

Resumé

TODO: Resumé in Danish

Preface

TODO: Preface

Test citation (TODO: remove test citation): (Name, 2000)

1 Introduction

2 Related Work

3 Background

4 Model-Free Reinforcement Learning

5 Problem Formulation

6 Network Architecture

7 Simulation Environment

8 Experimental Setup

9 Results

10 Ablation Studies

11 Discussion

12 Conclusion

13 Future Work

Bibliography

Name, R. (2000). Fascinating title. *Journal of Testing 420*(69), 69–420.

A Dataset