

UNIVERSITY OF APPLIED SCIENCES BERLIN

Report

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# AI in der Robotik

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by

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XX. Month, Year

# Abstract

## **AI in der Robotik**

This should be a single paragraph of not more than 500 words, which concisely summarizes the entire proposal.

# Contents

# Chapter 1

## Introduction

examples citations:

scientific [[doi:10.1162/neco.1989.1.4.541](https://doi.org/10.1162/neco.1989.1.4.541)]

general online [LSVRC]

git [chollet2015]

### 1.1 Motivation

TODO

### 1.2 Project Objective

TODO

### 1.3 Proceeding and Structure of the Work

TODO

# Chapter 2

## Fundamentals

TODO

### 2.1 Example section

Example figure ?? with citation

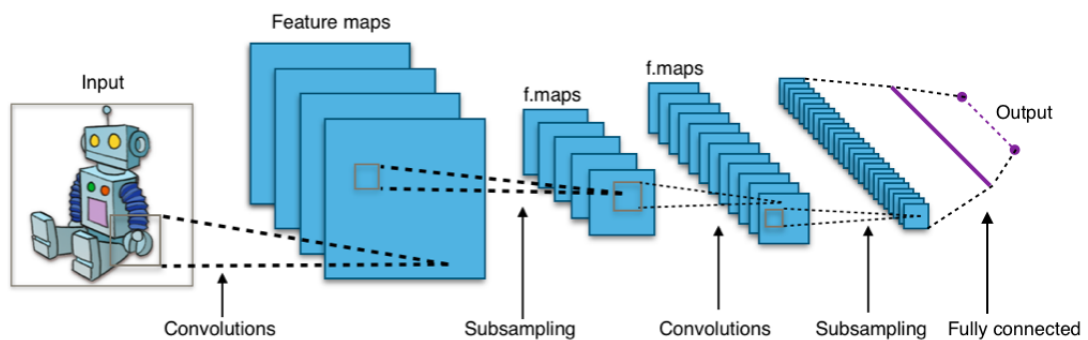


Figure 2.1: Exemplary CNN architecture [typical\_cnn\_img]

### 2.2 Example section

TODO

# Chapter 3

## Conception

TODO

### 3.1 Example section

TODO

#### 3.1.1 Example subsection

Example equation

$$\pi_{\theta}(s, a) = P[a|s, \theta] \tag{3.1}$$

Here,  $s$  represents the state,  $a$  the action and  $\theta$  is the model parameters of the policy network. The policy can be seen as the agent's behavior, i.e. a function to map from state to action.

# Chapter 4

## Implementation

Code example and referencing: Code ???. Do NOT use this for large code parts. Therefore use the appendix. This is only for really relevant short-liners.

```
1 from keras import backend as k
2 ...
3 def __init__(...):
4     ...
5     self.graph = k.get_session().graph
6     ...
```

Code snippet 4.1: Agent class - Tensorflow graph

### 4.1 Example Section

TODO

### 4.2 Example Section

TODO

# Chapter 5

## Evaluation

TODO

### 5.1 Example Section

Example of table with next descriptions on following side:

Column 1	Column 2	Column 3
TODO	TODO	TODO
TODO	TODO	TODO

**Table 5.1:** Description

### 5.2 Example Section

TODO



# Chapter 6

## Conclusion

TODO

### 6.1 Summary

TODO

### 6.2 Future Work

TODO

# List of Figures

# List of Tables

# Source Code Content

# Appendix A

## About Appendices

Appendices are optional and should only be used if necessary.