



**KTH Computer Science
and Communication**

Benchmarking Human Solving Methods for Rubik's cube

Duis autem vel eum iruire dolor in hendrerit in vulputate velit esse molestie consequat,
vel illum dolore eu feugiat null

ANDREAS NILSSON ANIL9@KTH.SE
ANTON SPÅNG ASPANG@KTH.SE

DD143X - Bachelor Thesis
Supervisor: Michael Schliephake
Examiner: Örjan Ekeberg

TRITA xxx yyyy-nn

Abstract

This is a skeleton for KTH theses. More documentation regarding the KTH thesis class file can be found in the package documentation.

Referat

Sammanfattning

Denna fil ger ett avhandlingsskelett. Mer information om L^AT_EX-mallen finns i dokumentationen till paketet.

Contents

1	Introduction	1
1.1	Problem Definition	1
1.2	Problem Statement	1
1.3	Purpose	1
1.4	Structure	1
2	Background	4
2.1	Competitions	4
2.1.1	Speedcubing	4
2.1.2	Fewest moves	4
2.2	Rubik's Cube	4
2.2.1	Description	4
2.2.2	Notation	4
2.3	Algorithms	4
2.3.1	Lbl using daisy method	4
2.3.2	Dedmore algorithm	4
3	Method	5
3.1	Literature study	5
3.2	Implementation and data collection	5
3.3	Analyze and representation	5
4	Implementation	7
4.1	Cube representation	7
4.2	Algorithms	7
4.3	Scramble	7
4.4	Difficulty	7
5	Results and Analyze	9
5.1	Data	9
5.2	Comparison	9
6	Discussion	11
6.1	Comparison	11

6.2 Errors	11
7 Conclusion	13
References	15
Bilagor	15
A RDF	17

Chapter 1

Introduction

- 1.1 Problem Definition
- 1.2 Problem Statement
- 1.3 Purpose
- 1.4 Structure

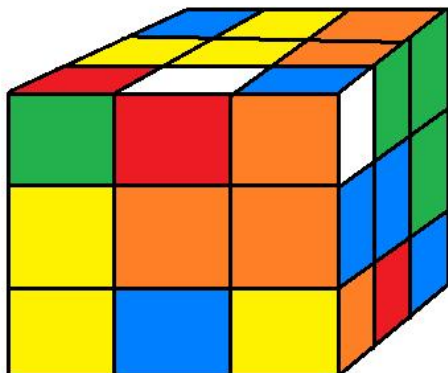


Figure 1.1. Scrambled cube

Chapter 2

Background

2.1 Competitions

2.1.1 Speedcubing

2.1.2 Fewest moves

2.2 Rubik's Cube

2.2.1 Description

2.2.2 Notation

2.3 Algorithms

2.3.1 Lbl using daisy method

White cross

White corners

Middle layer edges

Yellow cross

Yellow corners

Last layer permutation

2.3.2 Dedmore algorithm

Top corners (the X)

Top edges

Middle layer

Bottom corners

Bottom edges

Chapter 3

Method

3.1 Literature study

3.2 Implementation and data collection

3.3 Analyze and representation

Chapter 4

Implementation

4.1 Cube representation

4.2 Algorithms

4.3 Scramble

4.4 Difficulty

Chapter 5

Results and Analyze

5.1 Data

5.2 Comparison

Chapter 6

Discussion

6.1 Comparison

6.2 Errors

Chapter 7

Conclusion

[1]

References

- [1] Hej. Madehow. *coolt*, 50:9–19, 2001.

Appendix A

RDF

And here is a figure

Figure A.1. Several statements describing the same resource.

that we refer to here: A.1