

MASTER THESIS

Testing the level of chess game effectiveness depending on the type of used neural network

Michał DYLA

Student identification number: (274132)

Programme: Control, Electronic, and Information Engineering

Specialisation: Data Science

SUPERVISOR

⟨dr inż. Tomasz Grzejszczak⟩

DEPARTMENT (Department of Automatic Control and Robotics) Faculty of Automatic Control, Electronics and Computer Science

CONSULTANT

⟨mgr Eryka Probierz⟩

Gliwice 2022

Thesis title

Testing the level of chess game effectiveness depending on the type of used neural network

Abstract

(Thesis abstract – to be copied into an appropriate field during an electronic submission – in English.)

Key words

(2-5 keywords, separated by commas)

Tytuł pracy

Thesis title in Polish

Streszczenie

(Streszczenie pracy – odpowiednie pole w systemie APD powinno zawierać kopię tego streszczenia.)

Słowa kluczowe

(2-5 slow (fraz) kluczowych, oddzielonych przecinkami)

Contents

1	Introduction	1
2	[Chess playing AI]	3
	2.1 Chess	3
3	[Chapter title]	5
	3.1 [Section title]	5
	3.2 [Subsection title]	5
4	Summary	7
Re	eferences	9
Τe	echnical documentation	11
Li	st of abbreviations and symbols	13
Li	st of additional files in electronic submission (if applicable)	15
Li	st of figures	17
T.i	st of tables	19

Introduction

[Chess playing AI]

Before further discussion about thesis topic, it is require to analyze main components and issues related to it. To make those speculations easier to understand and internalize, they will be divided into two main sections: chess game logic and application logic. Both of those topics will be described in each distinct sections, starting with chess game logic.

2.1 Chess

[Chapter title]

tekst

3.1 [Section title]

3.2 [Subsection title]

Each figure in the document should be referred to at least once (fig. 3.1). Each table in the document should be referred to at least once (Tab. 3.1).

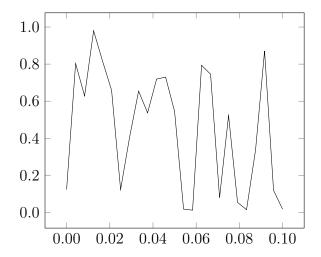


Figure 3.1: Figure caption.

Table 3.1: A caption of a table is ABOVE it.

	method											
				alg. 3	alg. 4	$1, \gamma = 2$						
ζ	alg. 1	alg. 2	$\alpha = 1.5$	$\alpha = 2$	$\alpha = 3$	$\beta = 0.1$	$\beta = -0.1$					
0	8.3250	1.45305	7.5791	14.8517	20.0028	1.16396	1.1365					
5	0.6111	2.27126	6.9952	13.8560	18.6064	1.18659	1.1630					
10	11.6126	2.69218	6.2520	12.5202	16.8278	1.23180	1.2045					
15	0.5665	2.95046	5.7753	11.4588	15.4837	1.25131	1.2614					
20	15.8728	3.07225	5.3071	10.3935	13.8738	1.25307	1.2217					
25	0.9791	3.19034	5.4575	9.9533	13.0721	1.27104	1.2640					
30	2.0228	3.27474	5.7461	9.7164	12.2637	1.33404	1.3209					
35	13.4210	3.36086	6.6735	10.0442	12.0270	1.35385	1.3059					
40	13.2226	3.36420	7.7248	10.4495	12.0379	1.34919	1.2768					
45	12.8445	3.47436	8.5539	10.8552	12.2773	1.42303	1.4362					
50	12.9245	3.58228	9.2702	11.2183	12.3990	1.40922	1.3724					

Summary

- synthetic description of performed work
- conclusions
- $\bullet\,$ future development, potential future research
- Has the objective been reached?

Appendices

Technical documentation

List of abbreviations and symbols

DNA deoxyribonucleic acid

MVC model-view-controller

N cardinality of data set

 μ membership function of a fuzzy set

 \mathbb{E} set of edges of a graph

 \mathcal{L} Laplace transformation

List of additional files in electronic submission (if applicable)

Additional files uploaded to the system include:

- source code of the application,
- test data,
- a video file showing how software or hardware developed for thesis is used,
- etc.

List of Figures

3.1	Figure caption.																																				-
-----	-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

List of Tables

3.1	A caption of a table is ABOVE it	6
-----	----------------------------------	---