

# Machine Learning Approaches to the Blockchain

some hyped-up tagline

#### Jean-Paul Ebejer

Supervised by Dr Zhivago

Co-supervised by Dr Who

Department of Alchemy

**Faculty of Something** 

University of Malta

December, 2021

A dissertation submitted in partial fulfilment of the requirements for the degree of M.Sc. in Your Degree.



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First edition, Tuesday 7<sup>th</sup> December, 2021



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No portion of this work has been submitted in support of an application for another degree or qualification of this or any other university or institution of higher education. I hold the University of Malta harmless against any third party claims with regard to copyright violation, breach of confidentiality, defamation and any other third party right infringement.

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Candidate (Id.)	Jean-Paul Ebejer (123456M)	
6		
Signature of Student	<del></del>	
Date	Tuesday 7 <sup>th</sup> December, 2021	

To The Avengers

You know, for saving the world.

#### **Acknowledgements**

These are the acknowledgements. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### **Abstract**

This is the abstract. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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# **List of Abbreviations**

CDMA Code Division Multiple Access	. 3
<b>GSM</b> Global System for Mobile communication	3
TDMA Time Division Multiple Access	3
UA Used Acronym	. 3

#### Introduction

Note that you may have multiple \include statements here, e.g. one for each subsection.

#### 1.1 | Motivation

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

A beautiful table is shown in Table 1.1, data from Ebejer et al. (2012) (when citing as part of text, otherwise (Ebejer et al., 2012)).

#### 1.2 | Aims and Objectives

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original

		w = 8				w = 16	
	t = 0	t = 1	t = 2	-	t = 0	t = 1	t=2
dir = 1							
С	0.0790	0.1692	0.2945		0.3670	0.7187	3.1815
С	-0.8651	50.0476	5.9384		-9.0714	297.0923	46.2143
С	124.2756	-50.9612	-14.2721		128.2265	-630.5455	-381.0930
dir = 0							
С	0.0357	1.2473	0.2119		0.3593	-0.2755	2.1764
С	-17.9048	-37.1111	8.8591		-30.7381	-9.5952	-3.0000
С	105.5518	232.1160	-94.7351		100.2497	141.2778	-259.7326

Table 1.1: A Beautiful and Complex Table

language. There is no need for special content, but the length of words should match the language.



Figure 1.1: A test figure. This caption is huge, but in the list of figures only the smaller version in the square brackets will appear.

A test figure is shown in Figure 1.1.

#### 1.3 | Proposed Solution

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



Figure 1.2: The same super saiyan. Two times.

Two figures shown side by side are shown in Figure 1.2.

#### 1.3.1 | Showing the Use of Acronyms

In the early nineties, GSM was deployed in many European countries. Global System for Mobile communication (GSM) offered for the first time international roaming for mobile subscribers. The GSM's use of Time Division Multiple Access (TDMA) as its communication standard was debated at length. And every now and then there are big discussion whether Code Division Multiple Access (CDMA) should have been chosen over TDMA.

If you want to know more about Global System for Mobile communication (GSM), Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA) and other acronyms, just read a book about mobile communication. Just to mention it: There is another Used Acronym (UA), for testing.

#### 1.4 | Document Structure

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### **Background & Literature Overview**

In this section you need to explain all the theory required to understand your dissertation (i.e. the following chapters)

#### 2.1 | Some Technique One

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### 2.1.1 | Some Sub-technique One

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no informa-

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#### 2.1.1.1 | Some Sub-sub-technique One

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 2.2 | Some Technique Two with Super Long Title Which Will Overrun In Header

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a

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Imagine some colourful description on Some Technique Three.

#### 2.3 | Evaluation Criteria

This section should contain information on the metrics and background used to evaluate your work.

#### 2.4 | Related Work

In this section you need to explain (and reference) similar work in literature. Make sure to:

- Give a systematic overview of papers with related/similar work
- Highlight similarities/differences to your work (perhaps in the form of a table)

Note that this section may be sectioned based on the different aspects of your dissertation. Some referenced text, as an example (Arrighi, 2003; Ebejer et al., 2016; Withers-Martinez et al., 2012).

# 2.5 | An Example of Suppressing Page Numbers on A Float Page

Refer to Figure 2.1.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### 2.6 | Summary

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



Figure 2.1: Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Materials & Methods

This section should include a recipe of what you did (explain what you have done so if someone wants to reproduce the experiment, they can). A flow chart is typically helpful. Also, make sure to define all software that you used including version numbers and OS. Should also include a description of statistical methods used (if any).<sup>1</sup>

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### 3.1 | An Example of an Equation

The following is the most beuatiful equation in maths, Euler's Identity (Equation 3.1).

$$e^{i\pi} + 1 = 0 (3.1)$$

where:

e =the constant

i =of complex fame

 $\pi$  = not of the apple variety

<sup>&</sup>lt;sup>1</sup>For more information see: http://rc.rcjournal.com/content/49/10/1229.short

#### 3.2 | Summary

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### **Results & Discussion**

Should include a reiteration of the experiments, and their outcome. Together with a description (discussion). Preamble should include a reminder of the aims and objectives together with a list of experiments to achieve these. Should include many charts and other visualization with appropriate descriptions.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the

letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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#### 4.1 | An Example of a Table Spanning Multiple Pages

The following is an example of a table (Table 4.1) spanning multiple pages.

Table 4.1: Performance of Ligity in HTS mode against the Ligity-compatible DUD-E targets. The mean (and standard deviation in parentheses) values of ROC AUC using Tanimoto is 0.622 ( $\pm 0.132$ ), while for Tversky it is 0.671 ( $\pm 0.142$ ); the mean EF<sub>1%</sub> using Tanimoto is 5.648 ( $\pm 8.668$ ), while for EF<sub>1%</sub> using Tversky it is 9.047 ( $\pm 12.713$ ).

Target	No. of	No. of	ROC	ROC	BEDROC	BEDROC	EF <sub>1%</sub>	EF <sub>1%</sub>
	Ac-	De-	AUC	AUC	Tani-	Tversky	Tani-	Tversky
	tives	coys	Tani-	Tversky	moto		moto	
			moto					
ABL1	182	10,750	0.563	0.473	0.077	0.077	1.653	2.204
ACE	281	16,877	0.787	0.787	0.336	0.401	12.425	19.525
ACES	453	26,242	0.634	0.645	0.077	0.155	1.766	5.518
ADA	93	5,450	0.724	0.660	0.149	0.147	3.251	3.251
ADA17	532	35,898	0.638	0.728	0.103	0.283	1.317	9.030
ADRB1	247	15,850	0.523	0.647	0.065	0.129	1.619	5.262
ADRB2	231	14,999	0.523	0.589	0.052	0.040	1.735	0.000

(continued...)

Target	No. of No. of ROC		ROC	BEDROC	BEDROC	EF <sub>1%</sub>	EF <sub>1%</sub>	
J	Ac-	De-	AUC	AUC	Tani-	Tversky	Tani-	Tversky
	tives	coys	Tani-	Tversky	moto	,	moto	J
		J	moto	,				
AKT1	293	16,450	0.386	0.548	0.039	0.107	2.737	3.080
AKT2	117	6,900	0.511	0.685	0.140	0.194	8.568	8.568
ALDR AMPC	159 48	8,988 2,845	0.574 $0.521$	0.610 0.541	0.202 0.049	0.172 0.023	$10.747 \\ 0.000$	6.322 0.000
ANDR	269	14,349	0.722	0.742	0.194	0.354	4.839	24.938
AOFB BACE1	121	6,875	0.422	0.464	0.045	0.027	1.652	0.000
BRAF	283 152	18,100 9,950	$0.441 \\ 0.612$	0.775 0.639	0.017 0.208	0.310 0.165	0.000 12.502	13.062 5.264
CASP3	199	10,694	0.600	0.734	0.068	0.258	0.502	7.031
CDK2 COMT	$\begin{array}{c} 474 \\ 41 \end{array}$	27,838 3,846	$0.467 \\ 0.789$	0.507 0.889	0.021 0.338	$0.048 \\ 0.665$	0.000 19.447	1.055 58.341
CP2C9	120	7,449	0.518	0.634	0.058	0.186	1.660	8.299
CP3A4	170	11,787	0.450	0.493	0.022	0.057	0.000	2.345
CSF1R CXCR4	166 40	12,149 3,405	0.526 0.575	0.542 0.722	0.136 0.217	0.152 0.134	6.031 12.665	7.238 0.000
DEF	102	5,699	0.732	0.833	0.212	0.379	10.786	15.689
DHI1 DPP4	330 533	19,348 40,941	0.481 0.586	0.595 0.591	$0.089 \\ 0.154$	0.062 0.157	2.422 4.312	1.211
DPP4 DRD3	480	34,048	0.386 $0.484$	0.591 $0.441$	0.134	0.157	1.251	3.937 0.626
DYR	231	17,196	0.694	0.758	0.210	0.046 0.230	6.504	7.371
EGFR ESR1	542 383	35,047 20,683	0.593 0.838	0.491 0.861	$0.054 \\ 0.527$	$0.037 \\ 0.594$	0.922 31.281	0.000 39.101
ESR2	367	20,199	0.844	0.870	0.563	0.644	20.130	32.644
FA10	537	28,324	0.564	0.674	0.058	0.118	0.930	2.232
FA7 FABP4	114 47	6,249 2,749	0.762 0.786	$0.859 \\ 0.744$	0.210 0.191	0.332 0.276	6.105 0.000	8.721 10.623
FAK1	100	5,350	0.642	0.531	0.111	0.065	2.019	0.000
FGFR1 FKB1A	139 111	8,698 5,799	$0.511 \\ 0.605$	0.522 0.751	$0.036 \\ 0.162$	$0.088 \\ 0.164$	0.722 8.122	1.445 3.610
FNTA	592	51,493	0.411	0.731	0.012	0.104	0.000	4.053
FPPS	85	8,842	0.917	0.985	0.323	0.776	2.360	36.581
GCR GLCM	258 54	14,998 3,790	0.805 0.667	0.834 0.685	$0.244 \\ 0.182$	0.324 0.279	3.092 1.873	8.116 11.240
GRIA2	158	11,842	0.662	0.684	0.248	0.154	11.392	5.696
GRIK1 HDAC2	101 185	6,547 10,300	0.656 0.676	0.668	0.203 0.187	$0.102 \\ 0.201$	7.978 4.318	1.995 4.318
HDAC2	170	10,300	0.640	0.734 0.819	0.137	0.201	2.946	8.250
HIVINT	100	6,640	0.390	0.554	0.030	0.116	0.000	3.018
HIVPR HIVRT	535 338	35,724 18,884	0.663 0.495	0.872 0.475	$0.072 \\ 0.124$	0.490 0.085	$0.187 \\ 4.443$	23.898 1.777
HMDH	170	8 <i>,</i> 750	0.480	0.906	0.068	0.652	2.358	35.963
HS90A HXK4	88 92	4,850	0.635	0.506	0.096	0.083 0.307	0.000	3.436 9.766
IGF1R	148	4,700 9,300	0.662 0.502	0.803 0.575	0.206 0.057	0.307	15.192 2.037	14.941
INHA	43	2,300	0.493	0.575	0.031	0.045	0.000	0.000
ITAL JAK2	138 107	8,500 6,500	0.619 0.472	$0.465 \\ 0.475$	0.037 0.073	$0.065 \\ 0.118$	0.000 2.807	0.728 6.549
KIF11	116	6,850	0.755	0.781	0.149	0.219	4.289	2.574
KIT KITH	166	10,449	0.463	0.437	0.045	0.030	0.000	0.000 47.483
KPCB	57 135	2,850 8,699	0.649 0.753	0.838 0.813	0.228 0.220	0.709 0.338	14.069 8.923	47.483 12.641
LCK	419	27,391	0.471	0.437	0.031	0.043	0.000	1.910
LKHA4 Mapk2	171 101	9,448 6,148	0.718 $0.660$	0.694 0.670	0.238 0.174	0.150 0.199	8.203 5.988	1.758 3.992
MCR	94	5,149	0.816	0.888	0.215	0.454	6.436	19.307
MET MK01	166 79	11,249	0.566	0.531	0.130	0.065	6.032	0.603 3.821
MK01 MK10	104	4,550 6,600	$0.518 \\ 0.488$	0.602 0.489	0.121 0.020	0.206 0.031	5.095 0.962	3.821 0.962
MK14	578	35,847	0.511	0.589	0.040	0.064	0.173	0.519
MMP13	572	37,199	0.648	0.753	0.134	0.268	2.446	9.957

(continued...)

Target	No. of	No. of	ROC	ROC	BEDROC	BEDROC	EF <sub>1%</sub>	EF <sub>1%</sub>
	Ac-	De-	AUC	AUC	Tani-	Tversky	Tani-	Tversky
	tives	coys	Tani-	Tversky	moto		moto	
			moto					
MP2K1	121	8,146	0.669	0.569	0.187	0.058	3.293	0.823
NOS1	98	8,028	0.483	0.451	0.109	0.041	3.071	0.000
NRAM	98	6,200	0.853	0.859	0.342	0.290	11.221	3.060
PA2GA	99	5,150	0.793	0.756	0.225	0.153	1.020	3.059
PARP1	508	30,029	0.635	0.692	0.215	0.231	11.234	7.884
PGH1	195	10,798	0.645	0.637	0.077	0.100	0.000	2.050
PGH2	435	23,139	0.716	0.780	0.166	0.291	3.444	9.874
PLK1	107	6,800	0.658	0.531	0.123	0.048	1.871	0.000
PNPH	103	6,946	0.575	0.578	0.161	0.181	4.888	8.799
PPARA	373	19,399	0.783	0.778	0.262	0.280	6.693	7.764
PPARD	240	12,250	0.547	0.544	0.078	0.098	1.665	2.498
PPARG	484	25,299	0.515	0.605	0.055	0.118	0.619	4.955
PRGR	293	15,648	0.740	0.793	0.142	0.318	2.053	14.714
PTN1	130	7,249	0.398	0.538	0.055	0.090	0.000	3.068
PUR2	<u>50</u>	2,700	0.851	0.837	0.281	0.255	7.857	1.964
PYGM	77	3,944	0.403	0.492	0.016	0.137	0.000	3.917
PYRD	111	6,449	0.682	0.710	0.462	0.413	34.027	16.118
RENI	104	6,956	0.720	0.789	0.043	0.138	0.000	0.000
ROCK1	100	6,300	0.347	0.449	0.020	0.084	1.000	4.000
RXRA	131	6,950	0.788	0.900	0.219	0.596	6.091	27.407
SAHH	63	3,450	0.874	0.852	0.598	0.542	35.050	27.084
SRC	524	34,500	0.565	0.477	0.065	0.050	0.382	0.573
TGFR1	133	8,499	0.609	0.639	0.147	0.154	10.565	4.528
THB	103	<b>7,4</b> 50	0.794	0.762	0.238	0.150	10.614	0.965
THRB	461	27,000	0.605	0.706	0.063	0.166	2.166	5.632
TRY1	449	25 <i>,</i> 975	0.711	0.815	0.147	0.280	2.898	6.688
TRYB1	148	7,650	0.670	0.670	0.153	0.132	3.378	3.378
TYSY	109	6,745	0.594	0.725	0.071	0.226	0.911	5.468
UROK	162	9,850	0.525	0.650	0.036	0.120	0.000	1.854
VGFR2	409	24,948	0.632	0.578	0.083	0.093	1.465	1.465
WEE1	102	6,150	0.934	0.929	0.789	0.797	59.348	61.294
XIAP	100	5,150	0.752	0.974	0.190	0.897	8.077	51.490

#### 4.2 | Some Other Section

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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#### 4.3 | A Landscape Table Example

Next is an example of a wide table on a landscape oriented paper.

m	x	y	z	а	$A_m$	В	С	x	y	z	а	$A_m$	В	С
1	16.128	+8.872	16.128	1.402	1.373	-146.6	-137.6	16.128	+8.872	16.128	1.402	1.373	-146.6	-137.6
2	3.442	-2.509	3.442	0.299	0.343	133.2	152.4	3.442	-2.509	3.442	0.299	0.343	133.2	152.4
3	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
4	0.993	-0.429	0.993	0.086	0.08	25.6	90	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
5	1.29	+0.099	1.29	0.112	0.097	-175.6	-114.7	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
6	0.483	-0.183	0.483	0.042	0.063	22.3	122.5	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
7	0.766	-0.475	0.766	0.067	0.039	141.6	-122	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
8	0.624	+0.365	0.624	0.054	0.04	-35.7	90	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
9	0.641	-0.466	0.641	0.056	0.045	133.3	-106.3	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
10	0.45	+0.421	0.45	0.039	0.034	-69.4	110.9	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
11	0.598	-0.597	0.598	0.052	0.025	92.3	-109.3	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1

### 4.4 | Summary

# **Evaluation**

In an ideal world, you should have two kind of evaluations. The first is against some ground truth (perhaps a random model?). The second kind of evaluation is against other people's work (accuracy, speed, etc.). Any dimension which is of interest, should be evaluated. Evaluation should be statistically sound.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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#### 5.1 | Summary

# **Conclusions**

This section should have a summary of the whole project. The original aims and objective and whether these have been met should be discussed. It should include a section with a critique and a list of limitations of your proposed solutions. Future work should be described, and this should not be marginal or silly (e.g. add machine learning models). It is always good to end on a positive note (i.e. 'Final Remarks').

### **6.1** | Revisiting the Aims and Objectives

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### **6.2** | Critique and Limitations

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#### 6.3 | Future Work

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#### 6.4 | Final Remarks

### **Media Content**

If the dissertation has a DVD or pendrive attached to it, you will need a section which explains what is on the media (structure, files, data, etc.). This could be a table with filename and description.

# **Installation Instructions**

# **User Manual**

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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