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# ABSTRACT

Abstract is the summary of the whole study and presents all the major elements of the project report in a condensed form. It should involve the statement of the problem, the methodology that is followed, the results obtained and the main conclusions. It should not refer to any part of the report and no references should be cited in this section. It should be no more than a page in length and should consist of a single paragraph. It should not contain any headings, tabular material, chemical formulas, or footnotes.

Table of contents

[ABSTRACT ii](#_Toc93664907)

[LIST OF FIGURES v](#_Toc93664908)

[LIST OF TABLES vi](#_Toc93664909)

[LIST OF SYMBOLS/ABBREVIATIONS vii](#_Toc93664910)

[1. INTRODUCTION 1](#_Toc93664911)

[2. THEORETICAL BACKGROUND AND LITERATURE 2](#_Toc93664912)

[2.1. GENERAL INSTRUCTIONS 2](#_Toc93664913)

[2.2. FORMAT 2](#_Toc93664914)

[2.2.1. Character Fonts 2](#_Toc93664915)

[2.2.2. Spacing 3](#_Toc93664916)

[2.2.3. Left Adjusting 3](#_Toc93664917)

[2.2.4. Margins 3](#_Toc93664918)

[2.2.5. Pagination 4](#_Toc93664919)

[2.2.6. Headings 4](#_Toc93664920)

[2.2.7. Bibliographical Material 6](#_Toc93664921)

[2.2.8. Specially Designated Expressions 7](#_Toc93664922)

[2.2.9. Tables and Figures 7](#_Toc93664923)

[2.2.10. Appendices 9](#_Toc93664924)

[3. METHODOLOGY/MATERIALS, METHODS AND EXPERIMENTAL 11](#_Toc93664925)

[4. RESULTS AND DISCUSSION 12](#_Toc93664926)

[4.1. TYPESETTING 12](#_Toc93664927)

[4.2. PAPER QUALITY 12](#_Toc93664928)

[4.3. PRINTER 12](#_Toc93664929)

[4.4. BINDING 12](#_Toc93664930)

[5. CONCLUSIONS AND FUTURE WORK 13](#_Toc93664931)

[REFERENCES 14](#_Toc93664932)

[APPENDIX A: NUMERICAL EXAMPLE FOR RT-CAMKD 15](#_Toc93664933)

[APPENDIX B: DETECTED ACTIVITIES IN T1P1 TESTS 16](#_Toc93664934)

# LIST OF FIGURES

[Figure 3.1. Caption about first image 10](#_Toc81602175)

[Figure 3.2. Caption about multiple images. (a) First of multiple image, (b) Second of multiple image, (c) Third of multiple image. 11](#_Toc81602176)

[Figure 3.3. Growth curves of the wild type (AS102), wild type (AS107), and recombinant AS102-57 11](#_Toc81602177)

# LIST OF TABLES

[Table 3.1. Sequence of the preliminary 5](#_Toc81602469)

[Table 3.2. Caption about table construction years of the monuments religious and official antiquities in Heybeliada [12]. 10](#_Toc81602470)

[Table A.1. Drinking 18](#_Toc81602471)

[Table A.2. Drinking pouring behavior of the hypothetical sample of the monuments and official antiquities. 19](#_Toc81602472)

# LIST OF SYMBOLS/ABBREVIATIONS

A System matrixB Input matrix

G Plant transfer matrixG1 Plant disturbance matrix*R*  A closed and bounded region in E

δR Boundary of the region R

δRs s=1,…,p Complementary regular subsurface of the boundary δR, s being a positive scalar

*T*  Sampling time

*U*  Control input

xc Controller state vector

αc, αe Controller and estimator characteristics polynomials

Г Discrete plant control input matrixГ1 Discrete plant noise input matrix

λ Plant delay time or transportation lag

ADD Average detection delay

USA United States of America

RAM Random access memory

ASN Average sample number

i.i.d. Independently and identically distributed

JACS Journal of American Chemical Society

# INTRODUCTION

This manual involves the basic guidelines to prepare your project report in the correct format and this document may be used as a TEMPLATE as it is written in the required format.

In this section, basic information about the contents of Table of Contents, List of Figures, List of Tables, List of Symbols/Abbreviations and Introduction will be provided.

Reports are expected to have a Table of Contents for the convenience of the reader. It should list the main headings and subheadings in the report with the correct page numbers. If figures and tables are used in the report, List of Figures and List of Tables should be given after the Table of Contents and they should contain the page number of each entity. Similarly, a List of Symbols/Abbreviations should also be included which contain abbreviations listed alphabetically as a separate group following the symbols.

The Introduction section briefly states the general topic and gives some background, defines the terms and scope of the topic, outlines and evaluates the current situation, identifies the importance of the proposed research, states the research problem/questions and presents research aims and/research objectives, (states the hypothesis), outlines the order of information in the thesis.

General instructions regarding the format of the project report will be given in the next section.

# THEORETICAL BACKGROUND AND LITERATURE

This section provides a theoretical framework consisting of concepts, together with their definitions, and existing theory/theories used in the study in subsections. It should also involve a literature review that explains the reader what other researchers have reported in the field of your study.

## GENERAL INSTRUCTIONS

The first chapter (in most cases, Introduction) of the thesis will start on the first page of the text, i.e. the first page enumerated in Arabic numerals. When writing your thesis, pay attention to some of the precautions listed below:

* The whole text should be justified (Ctrl+J).
* Check your English text for grammar, spelling, and punctuation errors with Word or similar feature.
* Equations must be centered and equation number must be written with chapter number. Equation font should be Cambria Math and font size can differ according to the instructions from author's thesis supervisor.

## FORMAT

After a main heading, it is required that a short description text is given before the next subheading.

### Character Fonts

As a character font, use Times New Roman. The font size must be 12 pt in the text including formulas, equations, table headings and figure captions. At least 8 pt should be used in figures, tables and super or subscripts. Footnotes, long biographical quotes and extensive quotations should be 10 pt [1].

### Spacing

Spacing of the text material shall be 1.5 or when necessary integer multiples thereof. Body text must follow paragraph properties: 1.5 Line spacing, Before 0 pt, After 10 pt spacing.

Also;

* Footnotes - single spacing (Page 8)
* Long biographical quotes - single spacing
* Extensive quotations - single spacing and indented one (1) centimeter relative to the text material (Page 12)

### Left Adjusting

The left adjusting point of titles and headings shall be 35 mm from the left edge of the paper. You can use the appropriate left adjusting command in computer typesetting.

### Margins

Margins of pages shall conform to the following specifications:

* Left margin - 3.5 cm from edge of paper
* Right margin - 2 cm from edge of paper
* Top margin - 3.5 cm from edge of paper
* Bottom margin - 2 cm from edge of paper

The margins must be observed on charts, graphs, tables, and drawings. Folded papers will not be accepted unless there is absolutely no other way for the material to be presented.

### Pagination

Each page in the thesis (except the title page) is expected to bear a number. Only one side of the paper may be used. The preliminary section, including the title page; table of contents, etc., should be numbered, using **lower case Roman Numerals**, e.g., i, ii, iii, etc. The title page counts as Page i, but the number does not appear [4]. The sequence of the preliminary section is shown in Table 3.1:

Table 3.1. Sequence of the preliminary

|  |  |
| --- | --- |
| Title Page | Page i number does not appear |
| Abstract | Page ii  |
| Table of Contents | Page iii, iv as necessary |
| List of Figures | Page iv, v as necessary |
| List of Tables | Page v, vi as necessary |
| List of Symbols / Abbreviations | Page vi, vii as necessary |

For the remainder of the thesis, Arabic numbers are used. Each page must be numbered. **Page numbers are to be placed two centimeters from the top and right hand margins on the pages and must be 12 point.** Include all pages for illustrations, tables, appendices, bibliography, etc. Use of suffixes, such as 25a, 25b, etc., will not be approved. The numbering in the main body of the thesis should begin with Page 1 and run consecutively to the last page. No punctuation, such as dash or a period, should accompany the page number.

**Paragraphs must start without indentation.** Series of paragraph items which are to be listed without headings under any of the regular headings may, for clarity, be designated by special bullets such as “●”or enumerated by (i), (ii), (iii), etc [5]. **A new paragraph must not begin at the bottom of a page if there is not sufficient space for at least two text lines.**

### Headings

Main headings numbered such as 1., 2., etc. must obey the following rules:

* They **must begin a new page**. Omit the period at the end of the heading. Main headings must be typed in bold face and must be in **capital letters and in 14 points**.
* Main headings should reflect content of the text that follows. Main headings are not to be called as chapters.
* The number of the headings will be followed by **a period** **and** **a tab**.
* The format for the heading must follow: 1.5 Line spacing, Before 24 pt, After 24 pt spacing.

Second headings numbered such or 2.1., 2.2., etc. must obey the following rules:

* They must begin according to Section 2.2.3 and be typed in **12 points, bold face and, capital letters**; i.e., the first letter of each word except conjunctions, prepositions and articles must be a capital letter. Omit period at the end of heading.
* The number designation of the second heading will be followed with a period and a tab.
* Second headings must follow the following format: 1.5 Line spacing, Before 24 pt, After 24 pt spacing, but **need not begin a new page**.

First subheadings numbered such as 2.1.1., 2.1.2., etc. must obey the following rules:

* They must be typed on separate lines beginning at the left margin line of the text, but **need not begin a new page**.
* They must be typed in **bold face**, left justified and with capital and **lower case letters**.
* The number designation of the heading will be followed by **a period and a tab**. Omit period at the end of the heading.
* First subheadings must follow the following format: 1.5 Line spacing, Before 24 pt, After 24 pt spacing, but **need not begin a new page**.

Second subheadings numbered such as 2.1.1.1., 2.1.1.2., etc. must obey the following rules; however, second subheading, should be avoided if possible.

* They must be typed on separate lines beginning at the left margin line of the text.
* They must be typed in 12 points, bold face, italic, left justified and with capital and lower case letters except conjunctions, prepositions and articles.
* The number designation shall be followed by a period and two spaces.
* Second subheadings must follow the following format: 1.5 Line spacing, Before 0 pt, After 10 pt spacing, but **need not begin a new page**.
* Use of third subheadings numbered such as 2.1.1.1.1 and 2.1.1.1.2., etc. is not allowed. Instead, unnumbered subheadings with the following format may be used: bold, first letters capital, left aligned, 1.5 Line spacing, Before 0 pt, After 10 pt. *e.g.* **Complementary Methods.** These subheadings must not be listed in the Table of Contents.

### Bibliographical Material

Citations and references shall be in the correct format:

* The number in square brackets such as "[8]", should indicate the order of first appearance of the reference in the text. The listing of references in the bibliography shall be in the order in which they are used in the text and shall bear the same number as was used in the reference in the text as illustrated in Page 14 [6].
* When multiple references have to be cited, they can be given in one of the following formats: [6-8] or [6,7,8] , [3,12-14] or [3,12,13,14].
* References should be written in the same format with the examples given in Page 14. Reference text should be justified.
* Reference text must follow 1.5 Line spacing, Before 0 pt, After 10 pt spacing

### Specially Designated Expressions

Specially designated expressions usually mean equations, formulae, etc. and they obey the following rules:

* They will be centered on the page according to Section 2.2.3 and separated from the preceding text and the succeeding text by (2xCR).
* The expressions shall be identified by an Arabic number in parenthesis like "(2.1)", "(2.2)", "(2.3)", etc., which should be placed opposite the expression and in line with the right margin of the text. They should be numbered within each chapter in the order of their appearance[7].
* Mathematical formulae and expressions must be typeset according to a consistent math-style throughout the whole thesis. The standard style for mathematical expressions in scientific publications makes use of italic typeface for variables in Latin characters and non-italic typeface for mathematical signs (+, -, parenthesis, etc.). Bold characters are usually reserved for vectors and matrices. In any case, the style used for in-text formulae should be the same as that of displayed formulae, see Equation (3.1).

|  |  |  |
| --- | --- | --- |
|  | $$Φ\_{1}\left(\genfrac{}{}{0pt}{}{x\_{1}}{x\_{2}}\right)=\left\{\begin{array}{c}\left(\genfrac{}{}{0pt}{}{4-x\_{2}+\left|x\_{1}-x\_{2}\right|}{4-x\_{1}+\left|x\_{1}-x\_{2}\right|}\right) if \sqrt{x₁^{2}+x₂^{2}} >2\\\left(\genfrac{}{}{0pt}{}{x₁}{x₂}\right) otherwise\end{array}\right.$$ | (3.1) |

### Tables and Figures

Tables and figures should be enumerated within each chapter, i.e., as 2.1, 2.2, 2.3, 3.1, 3.2, etc. The designation of each table or figure within the text should have only the first letter in capital (i.e., such as "Table 2.2" or "Figure 5.7") throughout the report. Tables, figures and their captions should be centered as shown in the examples. The captions should be as normal text, i.e., only the first letter should be capitalized. The caption format should follow: 1.5 Line spacing, Before 12 pt, After 24 pt for a Figure caption and 1.5 Line spacing, Before 24 pt, After 12 pt for a Table caption. There should be no blank lines before or after the Figure or Table Caption. There should not be a blank line before a boxed figure itself. However there must be a blank line after the table itself. Note that all floating items such as graphs, photographs and illustrations should be considered and designated as a figure or table, whichever is appropriate.

|  |
| --- |
|  |

Figure 3.1. Caption about first image

Table 3.2. Caption about table construction years of the monuments religious and official antiquities in Heybeliada [12].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Action** | **Sensitivity****(%)** | **Specifity****(%)** | **Total postural transitions** | **Type of subject** |
| lying | 100 ± 0 | - | - | Young and healthy(10 subjects) |
| StSi | 92 ± 9 | 85 ± 11 | 42 ± 0 |
| SiSt | 85 ± 11 | 92 ± 9 |
| walking | 100 ± 0 | - | - |
| lying | 100 ± 0 | - | - | Elderly and healthy(10 subjects) |
| StSi | 89 ± 8 | 83 ± 11 | 42 ± 0 |
| SiSt | 83 ± 11 | 89 ± 8 |
| walking | 98 ± 1 | - | - |

|  |  |
| --- | --- |
|  (a) |   (b) |
|  (c) |

Figure 3.2. Caption about multiple images. (a) First of multiple image, (b) Second of multiple image, (c) Third of multiple image.



Figure 3.3. Growth curves of the wild type (AS102), wild type (AS107), and recombinant AS102-57

### Appendices

A last section may contain supporting data for the text in the form of one or more appendices. Examples of appendix material include data sheets, questionnaire samples, flowcharts, illustrations, maps, software listings, charts, etc. if the appended data should include oversize illustrations or maps, several alternative methods of inclusions are available. If an ethical approval form is available for the study presented in the thesis, a scan copy of the form with original signatures on it must be presented in the Appendix e.g.; APPENDIX A: ETHICAL APPROVAL FORM.

If a section, table, figure, equation etc., is to be included in an appendix, the numbering should follow the same rules used within the thesis. In this case, however, they should begin with the letter of the respective appendix such as "Table A.l", "Equation (B.4)" etc. The title should start with the left justified appendix title such as "APPENDIX A: " and then followed by the descriptive title (See Page 17).

# METHODOLOGY/MATERIALS, METHODS AND EXPERIMENTAL

This section basically discusses the methods that are used to undertake this study, i.e. what was done and how it was done. Depending on the nature of the study, this part should involve the materials and experimental details or models and computational settings. Thus in an experimental study, Materials and Methods and Experimental sections can be presented in a single chapter or in separate chapters. In a computational study models and computational settings and in a literature review study handling of the topics, search engines and keywords used can be presented in a Methodology chapter.

# RESULTS AND DISCUSSION

This part involves the findings of your study and discussion of these findings. It may involve subsections devoted to different topics involved in the study. This section is expected to contain some reference to the literature to make comparisons with current literature data and/or to emphasize the originality of the work. A literature review study may involve several chapters devoted to different topics or analysis of the collected literature instead of a single Results and Discussion chapter.

## TYPESETTING

Word processing software such as MS Office WORD and Open Office WRITER are highly recommended. TEX or LATEX are also acceptable on the condition that accomplishes the format rules discussed in this document.

## PAPER QUALITY

The original copy shall be typed on 75 or 80 gr/m2 A4-size white paper. All reproduced copies should be of the same grade of paper.

## PRINTER

Printer settings must comply with A4-size paper and must be so that the page is not resized in printing.

## BINDING

The thesis should be bound by a spiral wire with transparent acetate sheets on the first and last pages. The final bound size of the thesis should conform to A4 size. The name and surname of the candidate, the type of degree obtained and the year should be printed in the above order on the spine of the cover.

# CONCLUSIONS AND FUTURE WORK (recommendatıons)

This part should involve two subsections, i.e. Conclusions and Future Work or Recommendations. In the Conclusions, main conclusions derived from the study should be presented. In the Future Work or Recommendations, on the other hand, the limitations of the study and your suggestions to overcome them or your suggestions for further research in the area should be provided.

REFERENCES **(Vancouver style must be used)**

1. Petitti DB, Crooks VC, Buckwalter JG, Chiu V. Blood pressure levels before dementia. *Arch Neurol*. 2005;62(1):112-6. (**Format for a journal article)**

2. Hong J, Ohtsuki T, editors. A state classification method based on space-time signal processing using SVM for wireless monitoring systems. *Personal Indoor and Mobile Radio Communications (PIMRC), 2011 IEEE 22nd International Symposium on*; 2011: IEEE. (**Format for a conference paper)**

3. Er NP, Cicekli I. A factoid question answering system using answer pattern matching. *Proceedings of the Sixth International Joint Conference on Natural Language* *Processing*. 2013:854-8. (**Format for a conference paper)**

4. Vapnik V. *The nature of statitistical learning theory*. New York: Spring-Verlag Press; 1995. (**Format for a book)**

5. Mitsuoka T. Role of intestinal flora in health with special reference to dietary control of intestinal flora. *Microbiology applications in food biotechnology*. 1990:135-48. (**Format for a book chapter)**

6. Rennie JD, Rifkin R. Improving multiclass text classification with the support vector machine. 2001. **(Format for other communications such as Memo)**

7. Yang M-H, Cornu`ejols A. Dr. Gabriela (Serban) Czibula’s homepage 2012 [cited 2012 24 April]. Available from: <http://www.cs.ubbcluj.ro/~gabis/ml/Lectures/6_SVM.pdf>. **(Format for a web page)**

8. eZ430-Chronos™ Development Tool User's Guide: Texas Instruments; [cited 2011 1 October]. Available from: <http://www.ti.com/lit/ug/slau292d/slauarrrrmut.pdf>. **(Format for a web page)**

9. Altınminareoğlu NC. Monographic study of Heybeliada. Master Thesis, İstanbul University, 1961. **(Format for a thesis)**

###### NUMERICAL EXAMPLE FOR RT-CAMKD

A={a1, a2, a3, a4, a5} where a1, a2, a3, a4 and a5 correspond to*drinking*, *eating*, *pouring*, *toothBrushing* and *turningKey* respectively. Let’s assume that Ta={M12x3}$∀a\in A$ and M12x3 =$\left[\begin{matrix}-46&3&8\\-46&3&8\end{matrix}\right]$ for a=a1. (We are demonstrating the operations only on a1 since operations on other simple actions are handled in a similar way.) To generate the pattern for a1, we start from the ***training*** algorithm:$ P\_{a\_{1}}^{1x5}\leftarrow $***featureExtraction***(M12x3|a=a1)

Then execution swiches to ***featureExtraction*** module: C2x3=$\left[\begin{matrix}-46&3&8\\-46&3&8\end{matrix}\right]$and m=2 and n=3, R2x3=$\left[\begin{matrix}1&1&1\\1&1&1\end{matrix}\right]$, d(1,:)=***K***((-46 3 8)), d(2,:)=***K***((-46 3 8)), d(3,:)=***K***((1 1 1)), d(4,:)=***K***((1 1 1)). Taking e=2.72 and using the ***K*** function: d14= $\frac{1}{1+2.72^{-46}}$ + $ \frac{1}{1+2.72^{3}}$ + $ \frac{1}{1+2.72^{8}}$ =1.047, di4$ ∀2\leq i\leq 4 $are calculated as d14, yielding D4x4=$\left[\begin{matrix}-46.000&3.000&8.000&1.047\\-46.000&3.000&8.000&1.047\\1.000&1.000&1.000&0.806\\1.000&1.000&1.000&0.806\end{matrix}\right]$ where 2m=4 and n+1=4.

######

###### DETECTED ACTIVITIES IN T1P1 TESTS

Table A.1 to Table A.2 illustrate detected activities in T1P1 tests. For a more concise presentation, *toothBrushing* and *turningKey* actions are abbreviated as tB and tK respectively within the tables. testId showing the number of the test, action names given in the column names indicate the actual type of action whereas action names within the table entries show detected activity result corresponding to the actual activity whose type is specified by the related column name. Therefore, when a table entry matches the related column name, it means a successful detection. The composite action tests incorporate several columns named as chunk\_2, chunk\_4 and chunk\_6, which represents first, second and third transitions respectively. Since transition type is inferred considering the simple actions right before and after the transition, the types detected for them are ignored.

Table A.1. Drinking

|  |  |
| --- | --- |
| **testId** | **drinking** |
| 1 | drinking |
| 2 | drinking |
| 3 | drinking |
| 4 | drinking |
| 5 | drinking |
| 6 | drinking |
| 7 | drinking |
| 8 | drinking |
| 9 | drinking |
| 10 | drinking |

Table A.2. Drinking pouring behavior of the hypothetical sample of the monuments and official antiquities.

|  |  |  |  |
| --- | --- | --- | --- |
| **testId** | **drinking** | **chunk\_2** | **pouring** |
| 1 | drinking | pouring | pouring |
| 2 | drinking | pouring | pouring |
| 3 | drinking | pouring | pouring |
| 4 | drinking | pouring | tB |
| 5 | drinking | pouring | tB |
| 6 | drinking | pouring | pouring |
| 7 | drinking | pouring | pouring |
| 8 | drinking | pouring | tB |
| 9 | drinking | pouring | pouring |
| 10 | drinking | pouring | tB |