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This Thesis is submitted to the Department of Computer Science as partial fulfillment of Master of Science in Computer Science/ Data Science degree

by

**Student Full Name**

Supervised by

**Supervisor Name**

Designation

Department of Computer Science

School of Mathematics and Computer Science (SMCS)

Institute of Business Administration (IBA), Karachi

Season Semester Year

Institute of Business Administration (IBA), Karachi, Pakistan

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**Student Full Name**

(Student Number: 00000)

**Committee:**

**Dr. First name Last name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Examiner – II, University Affiliation

**Dr. First name Last name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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# Dedication

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# Dedicate survey report.

\*Optional Page

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# Acknowledgement

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Acknowledge contributions and support.

\*Optional Page

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**\*\*Please ensue all your pages are in the same order as listed in Table of Contents.**

**\*\*\*Table of Content ought to start with Abstract.**

# Abstract

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Text of Abstract.

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**Keywords:** (3-7 subject/topical terms)

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Chapter 1

Introduction (Font size: 18, Times New Roman, left align)

This chapter provides an overview of significance and methodology of this research. It also provides a brief outline of the flow of the dissertation whole dissertation. It gives the purpose, objective, motivation.

It has been established in literature. However, this improved sharing and extensive use of in the organizational dynamics. Its importance has been increasing with advances in the ability to share it. This ease in sharing has been enabled by computerization rds.

|  |  |  |
| --- | --- | --- |
| **Type of memory** | **Abbreviation** | **Features** |
| Dual inline | DIP | Individual memory |
| Single inline | SIMM | Circuit board |
| RAM bus inline | RIMM | RDRAM chip |

**Table 1: Computer RAM** (Font size: 10, Times New Roman, left align)

## 1.1 Objectives (Font size: 14, Times New Roman, left align)

The data gathered by a weather station by a single homeowner at a timestamp can have an impact on the data globally across a time-series trend (D’holmes 2018). There is considerable uncertainty about the future of IoT regarding the speed, depth, and scale of industry disruption. because of the scale and complexity (Williams, Hardy and Nitschke 2019).

**(For text: font size: 12, Times New Roman, Justified, 1-tab space from every second paragraph onwards)**

## 1.1.1 Organizational objectives (Font size: 12, Times New Roman, left align)

### Nevertheless, the focus of the text remains on broad computer science concepts; the Python supplements are intended to give readers a deeper taste of programming (Denning 2005) than previous editions, but not to serve as a full-fledged introduction to programming. The Python topics covered are driven by the existing structure of the text. [Start every second-onwards paragraph after 1-tab space]

### Thus, Chapter 1 touches on Python syntax for representing data—integers, floats, ASCII, and Unicode strings. Chapter 2 touches on Python operations that closely mirror the machine primitives discussed throughout the rest of the chapter. Conditionals, loops, and functions are introduced in Chapter 5, at the time that those constructs are needed to devise a sufficiently complete pseudocode for describing algorithms.

### In short, Python constructs are used to reinforce computer science concepts rather than to hijack the conversation.

# References

Denning, Peter J. 2005. "Is computer science science?" *Communications of the ACM* 48 (4): 27-31.

Eloff, Jan HP, Les Labuschagne, and Karin P. Badenhorst. 1993. "A comparative framework for risk analysis methods." 12 (6): 597-603.

Williams, Susan, Catherine Hardy, and Patrick Nitschke. 2019. "Configuring The Internet of Things (IoT): A Review and Implications for Big Data Analytics." *Hawaii International Conference on Systems Sciences 52.*

Chicago citation style will be used throughout the document. Please visit:

<https://www.chicagomanualofstyle.org/tools_citationguide/citation-guide-2.html>

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Instructions for this report:

Abstract:

* Briefly summarize research domain, problem statement, proposed method, results and contributions. Should not be more than 500 words.

Chapter 1: Introduction

* Introduce and describe your research domain in detail – include figures and tables to facilitate understanding as required
* Now mention briefly the limitations of the current research domain
  + Don’t cite all papers
  + Cite only 2-3 papers and the mention all core limitations
  + Detailed limitations are mentioned in Chapter 2
* Motivate your research thoroughly (at least 1-2 long paragraphs – this is the connecting part between the existing research gaps and what you are trying to propose and do)
* Write your problem statement: this should be in Bold and highlighted. This is the problem you will be solving in your thesis
* Write your research questions
  + At least 1 question, and preferably 2-3
  + Each research question is derived from the problem statement.
  + Basically, you must answer each research questions when you present your results.
* Write your contributions.

Chapter 2: Background Knowledge

* If there is some background knowledge that is needed to understand your literature review or your proposed methodology, then detail it in this chapter. For instance, if you have deep learning-based solution, then the core deep learning technologies/algorithms should be detailed in this chapter.

Chapter 3: Literature Review

* What is your review type (systematic, narrative etc.)
* Draw a diagram of your LR methodology
* Include papers from the last 10 or 5 years
* Mention your online digital sources and your search queries
* If you filtered your results, inform about the filtration methodology
* Inform how many papers you extracted from which digital sources.
* Show the publication rate per year in a graph
* Make a table of the important journals, conferences, symposiums and workshops in which your extracted papers have been published
* Mention separately the important research groups of your domain which you identified from your results
* Make a table (or tables) of the final set of extracted papers – the columns of this table should be selected by you and should reflect the research domain. For instance, sample columns may include results of paper, proposed method, contributions, limitations, algorithms used, some label you assigned yourself to the article etc.
* By using this table, describe each paper separately (at least one paragraph per paper)
* Mention the limitations of each paper while describing this paper
* After finishing the above, summarize the limitations of each paper in a separate table. These limitations are the research gaps. In other words, you have now identified potential gaps which could be fulfilled to enhance the state of the art (you will address one of these gaps in your thesis)
* You have been asked to do the review in Thesis I final report as well – the review here presents modifications or additions to that.
* If proper review and gaps are not identified, then the coordinator may reject the thesis.

Chapter 4: Proposed Methodology

* Address one or more gaps by proposing a new and robust methodology/algorithm/technology etc. for your research domain
* You must justify thoroughly that your idea is novel
* Draw a detailed diagram or present pseudocode – the diagram/algorithm should follow standard design principles.
* In case of algorithm, present the complexity analysis
* Explain your proposed method thoroughly.

Chapter 5: Experimental Methodology and Results

* Present the detailed experimental methodology – it should allow to test each functionality/feature of your method/algorithm
* You should also mention details about the computer system (PC) on which you conducted the experiments
* Methodology should be depth-first (to answer your research questions only) as well as breadth-first (extra experiments to discover more about the potential of your proposed method)
* If possible, draw a diagram of your experimental methodology, e.g., in a flow chart, so that it is easy to follow your results in a sequence
* Present your results as per the methodology.
* Also mention how your results are different or improved from the results you mentioned in Thesis I.

Chapter 6: Discussion of Results

* Answer all research questions and in doing so, discuss your results in detail
* Identify all theoretical and practical limitations of your proposed methodology and summarize them in a table
* Based on your results, now enlist the core contributions of your thesis work and the potential impact your work can have on your research community.

Chapter 7: Conclusions and Future Work

* Conclude your work by mentioning the core research problem of your thesis and how you solved it
* Mention the contributions
* Mention the future work

NB: It is highly recommended that you should have at least made one research paper submission (either conference or journal) of your thesis work at the time of your defense. In case, you have done so, mention that in Chapter 1 as a footnote. And if you have a published paper, then include that in a List of Publications heading before Table of Contents.