Developing a Bidirectional Mutual Gaze Mechanism System for Human Robot Interaction

by

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A thesis submitted for the partial fulfillment of the requirement for the degree of Master of Science in Computer Science and Engineering (M.Sc. Engg.).

MASTER OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING

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CERTIFICATION

The thesis titled **"Developing a Bidirectional Mutual Gaze Mechanism System for Human Robot Interaction"**

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has been accepted as satisfactory in partial fulfillment of the requirement for the degree of MASTER OF SCIENCE IN COMPUTER SCIENCE & ENGINEERING on 29/10/2017

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Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

Author: Shayla Sharmin .....
(signature)

Date: 06 06, 2019

Dedicated
To
My Father and Mother

Abstract

The thesis is in ... and contains ... pages of text, ... chapters, ... figures, ... tables.

List of abbreviations and terms

API	Application Programming Interface
CPU	Central Processing Unit
IDE	Integrated Development Environment
IOT	Internet Of Things
VM	Virtual Machine

Table of Contents

List of Figures

List of Tables

1. Introduction

Some basic ways to manipulate text are *italics* and **bold**. One can reference Figures (see Figure 1 for an example) as well as cite references which are defined in the *references.bib* file.**spectre**, **example-reference**

The *Bibliography*, *List of Figures* and *List of Tables* are all automatically generated and references will be updated automatically as well. This means that if you've defined a citation but are not referencing it, it will not appear in the *Bibliography*. This also means that any Figure / Table / Citations numbers are automatically updated as well. Numbering is done by order-of-appearance.

One can create an itemized list:

- item a
- item b
- ...

Or enumerate them:

1. item x
2. item y
3. ...

Figure 1. *An image of the TalTech logo.*

A table with three columns can be seen in Table 1.

Table 1. *A table with some requirements*

Nr	**Requirement**	**Weight**
1	Price	High
2	Variety	Middle
3	Support	Low

We can use variables set in the *main.tex* file to render values like our title (Developing a Bidirectional Mutual Gaze Mechanism System for Human Robot Interaction) or supervisor names (**Supervisor**: Mohammad Moshiul Hoque, **Co-supervisor**: b).

2. Literature Review

This is the first real chapter of this thesis. Other chapters can be easily referenced, for example the introduction can be found as Chapter 1. Sections and/or subsections need to be labeled before one can reference them. See Section 5.2 for an example.

2.1 First Section of the First Chapter

Some text in the first section.

2.1.1 First Subsection

As well as some text in this subsection.

First Subsubsection

The Table of Contents only goes 3 layers deep (Chapter - Section - Subsection) so this subsubsection is not seen there.

2.2 Second Section of the First Chapter

3. Bi Directional Mutual Gaze Mechanism

One of the best resources for LaTeXbasics, and advanced constructs, is the LaTeXwikibook[1]. Of course fellow students, colleagues and a good internet search using your favorite search engine can do wonders if you're stuck.

[1] To be found at `http://en.wikibooks.org/wiki/LaTeX/`

4. Implementation

This is the first real chapter of this thesis. Other chapters can be easily referenced, for example the introduction can be found as Chapter **??**. Sections and/or subsections need to be labeled before one can reference them. See Section 5.2 for an example.

4.1 First Section of the First Chapter

Some text in the first section.

4.1.1 First Subsection

As well as some text in this subsection.

First Subsubsection

The Table of Contents only goes 3 layers deep (Chapter - Section - Subsection) so this subsubsection is not seen there.

4.2 Second Section of the First Chapter

5. Experimental Setup and Result Analysis

This is the first real chapter of this thesis. Other chapters can be easily referenced, for example the introduction can be found as Chapter **??**. Sections and/or subsections need to be labeled before one can reference them. See Section 5.2 for an example.

5.1 First Section of the First Chapter

Some text in the first section.

5.1.1 First Subsection

As well as some text in this subsection.

First Subsubsection

The Table of Contents only goes 3 layers deep (Chapter - Section - Subsection) so this subsubsection is not seen there.

5.2 Second Section of the First Chapter

6. Conclusion and Future Work

Appendices

Appendix 1 - Something

```
<!DOCTYPE html>
<html>
<body>

<h1>Example Title</h1>

<p>Some text here</p>

</body>
</html>
```

Appendix 2 - Something Else

Pythagorean theorem

$$x^n + y^n = z^n \tag{1}$$

Normal distribution

$$P(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-(x-\mu)^2/2\sigma^2} \tag{2}$$