Handbook for the Thesis Template

Version 2.0

Faculty of Applied Sciences
University of Sri Jayewardenepura

Preface

Version 1.0 was released in 2018.01.01. Modified by Pathum Kossinna from the mcgilletdclass Thesis template of the McGill University. This thesis template is contributed to the Statistics Special batch of 2016/2017.

Version 2.0 is modified by Dovini Jayasinghe (author) from Version 1.0 and is assisted by Vihanga Gunadasa, Asha Dilrukshi and Kalpani Perera under the guidance of Dr. Rajitha M. Silva of Department of Statistics. This thesis template is contributed to the Faculty of Applied Sciences, University of Sri Jayewardenepura.

Contact Persons

The following persons are responsible for further assistance required in the Version 2.0 of this Thesis template:

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1 Version 2.0

1.1 Introduction

Version 2.0 has eliminated the difficulties faced in Version 1.0 and has made the life easier with additions and alterations. This could be considered as a more generalized version which is contributed to the entire faculty of Applied Sciences, University of Sri Jayewardenepura. The major modification is that there are couple of tex files for each chapter of the thesis combined to create the main document (MainDocument.tex). Now it's just a matter of calling each chapter in order where ever necessary without making the main document lengthier which consumes a lot of time to navigate through by scrolling up and down. Besides there are numerous modifications added to the template. These amendments could be found in subsection 1.2.

1.2 Modifications & Add-ons

Refer Table 1 to see the modifications and add-ons of this Version.

Table 1: Modifications and add-ons of Version 2.0

Features	**Version 1.0**	**Modifications and add-ons in Version 2.0**
Student Details	Type where required.	Input only once. It automatically places where necessary.
Images	Only EPS format is supported.	Any format of image (gpeg, png, pdf, ...) is supported.
Front Pages	All in one main document.	Separate tex files are used for dedications, declaration and recommendation, acknowledgements and abstract to keep the main document short.
Chapters	All in one main document.	Separate tex files are used to overcome lengthy main document which made it clean and legible.
Appendices	-	Example codes to appendix, add several appendices and add long tables are provided in the template.
Caption Source	-	Enables to give the source file of the figure with the caption.
Chemical Compounds	-	Enables to add chemical compounds to the document.

2 Usage

Overleaf Latex Online editor is used to create these files. It is optional to have your own text editor installed to your machine (TexMaker, TexStudio, etc.). Otherwise the users can simply use online tex editor which is much convenient. In order to use the online editor, create an account (register) using the link https://www.overleaf.com/register with your email, then log in and upoload this complete folder. Figure 1 shows the registration pathway.

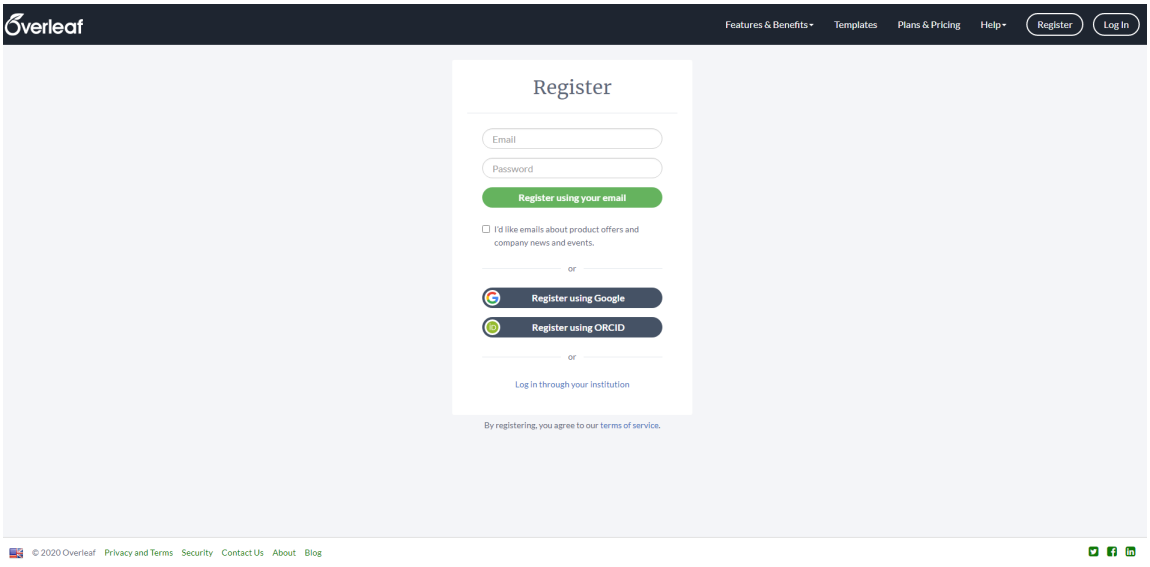

Figure 1: Open an account

2.1 Front Pages

Refer Figure 2 to find the front pages of the thesis. In Abstract.tex file you should write your abstract of the thesis. Acknowledge whoever required in Acknowledgement.tex file. Do not make any change for the content in DeclarationAndRecommendation.tex file in this folder. If you do not have multiple supervisors, then you may comment the following lines shown in Figure 3 in DeclarationAndRecommendation.tex file. User may add your dedication details in Dedication.tex file.

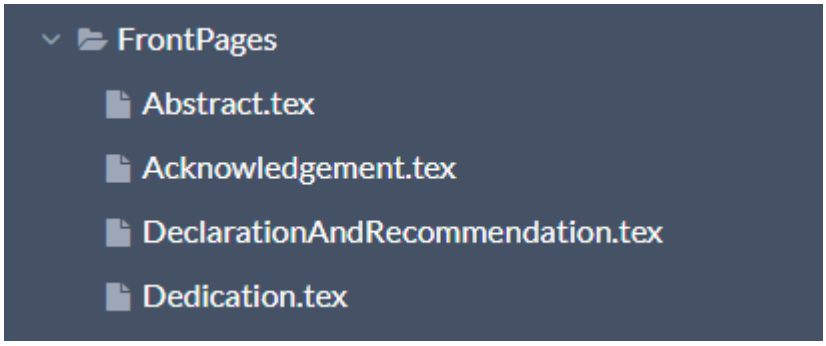

Figure 2: FrontPages folder

```
\noindent Signature:\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\\ %you may comment
this if not necessary
\noindent Date:\ldots\ldots\ldots\ldots\ldots\ldots\\ %you may comment this if not necessary
\noindent \supervisorSecond\\ %you may comment this if not necessary
\supervisorInstituteSecond\\  %you may comment this if not necessary

\noindent Signature:\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\\ %you may comment
this if not necessary
\noindent Date:\ldots\ldots\ldots\ldots\ldots\ldots\\ %you may comment this if not necessary
\noindent \supervisorThird\\  %you may comment this if not necessary
\supervisorInstituteThird\\   %you may comment this if not necessary
```

Figure 3: How to proceed when there is a single supervisor

2.2 Chapters

Refer Figure 4 to find the chapters of the thesis. Use separate tex file for distinct chapters as shown in this figure. Number of chapters depend upon the study. User may edit the folder as per the requirement. Within these tex files, sample chapters could be found, therefore replace every file with necessary details relevant to your study.

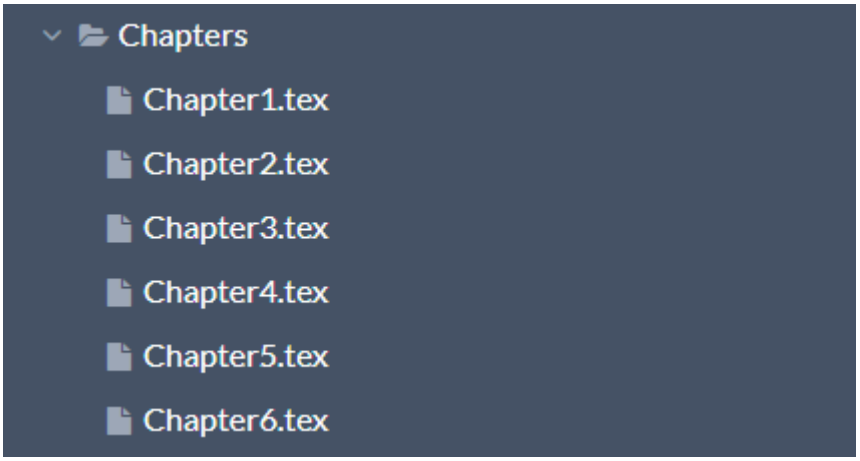

Figure 4: Chapters folder

2.3 Figures

Refer Figure 5 to find the Figures folder of the thesis. User should include all the image files to this folder by renaming each figure with a distinct name. Images that are included in this template could be found here. User may replace them with whatever relevant with the study.

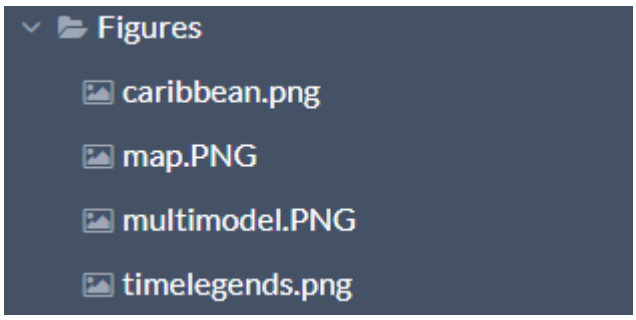

Figure 5: Figures folder

2.4 Bibliography

Citing the source in literature review is mandatory in research process. Figure 6 provides a partial screen shot of BibFile.bib file in the thesis folder. This contains entries of each and every bibliography in detail. Users may add their bibliography or references here by replacing the existing ones which are already used in this template as a sample.

```
@article{berry2017density,
    title={Density estimation on manifolds with boundary},
    author={Berry, Tyrus and Sauer, Timothy},
    journal={Computational Statistics \& Data Analysis},
    volume={107},
    pages={1--17},
    year={2017},
    publisher={Elsevier}
}

@inproceedings{gmm,
    author = {Javier Almeida and Nelson Velasco and Charlens Alvarez and Eduardo Romero},
    title = {{Gaussian mixture models for detection of autism spectrum disorders (ASD) in magnetic resonance imaging}},
    volume = {10572},
    booktitle = {13th International Conference on Medical Information Processing and Analysis},
    editor = {Eduardo Romero and Natasha Lepore and Jorge Brieva and Juan David García},
    organization = {International Society for Optics and Photonics},
    publisher = {SPIE},
    pages = {105 -- 113},
    keywords = {ABIDE, Autism Spectrum Disorders, Gaussian Mixture Model, MRI, Right Middle Temporal Gyrus},
    year = {2017},
    doi = {10.1117/12.2285902},
    URL = {https://doi.org/10.1117/12.2285902}
}

@article{kedd,
    title={Applications of estimators of a density and its derivatives to certain statistical problems},
    author={Singh, Radhey S},
    journal={Journal of the Royal Statistical Society: Series B (Methodological)},
    volume={39},
    number={3},
    pages={357--363},
    year={1977},
    publisher={Wiley Online Library}
}
```

Figure 6: Bibliography entries

You may use google scholar to obtain the bibTex format using the following steps (Figures 7 and 8) explained by an example article to be cited.

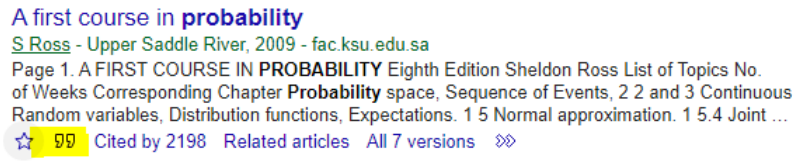

Figure 7: Step 1

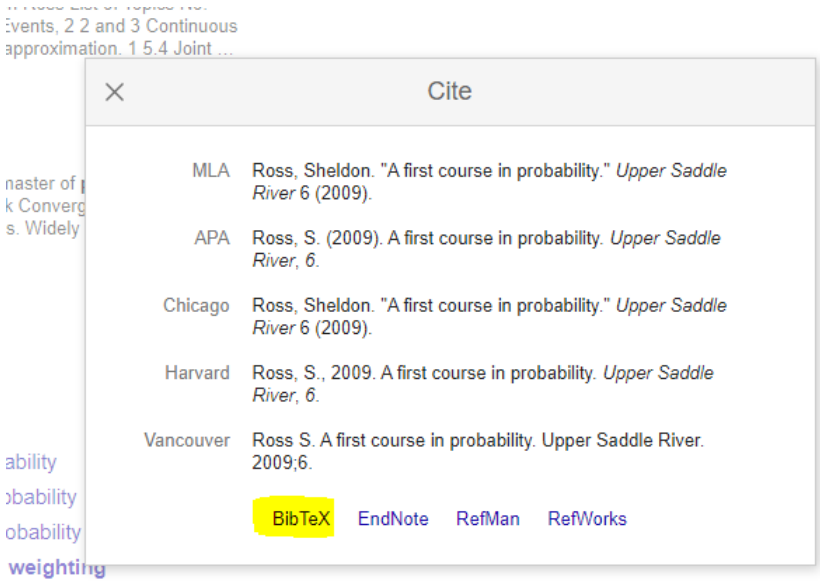

Figure 8: Step 2

2.5 Appendices

Users may have more than one appendices to include in the thesis, and Figure 9 shows the breakdown of the folder of this template. Here two appendices are added as AppendixA.tex and AppendixB.tex for reference. Note that AppendixA.tex file has a sample long table and AppendixB.tex has a sample R Script displayed. Likewise, one could add any number of attachments as appendices into this folder. density_function.R is the R script file called in the AppendixB.tex file. Similary, if one is interested in attaching there own R scripts, the procedure is to upload the R script here in Appendices folder and call it by the required code line as given in AppendixB.tex file.

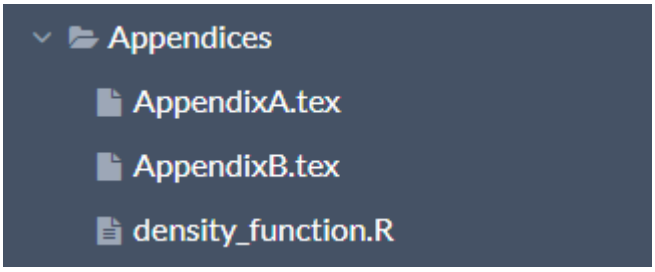

Figure 9: Appendices folder

2.6 Main document

This section consists of the changes to be made in the main document; that is MainDocument.tex.

As shown in the Figure 10, all the packages required to be used in this thesis are mentioned here. You may add more if needed with respect to your content. For example, to do some operation in a chapter, if you need to call a package, use this place to proceed.

```
%% add the required packages
\usepackage{graphicx}
\usepackage{xcolor,pict2e}
\usepackage{url}
\usepackage{microtype}
\usepackage{texshade}
\usepackage{longtable}
\usepackage{multicol}
\usepackage{amsmath}
\usepackage{float}
\usepackage{cite}
\usepackage{subcaption}
\usepackage{breqn}
\usepackage{natbib}
\usepackage{caption}
\usepackage[longtable]{multirow}
\usepackage{tabu}
\usepackage{colortbl}
\usepackage{footnote}
\usepackage{wrapfig}
\usepackage{lscape}
\usepackage{rotating}
\usepackage{epstopdf}
\usepackage{lipsum, pdflscape}
\usepackage{tikz}
\usepackage{listings}
\usepackage{xcolor}
\usepackage{geometry}
\usepackage{siunitx}
\usepackage{tocbibind}

```

Figure 10: Packages used in the thesis

As shown in Figure 11 enter all the details within the curly brackets. The methods to enter are commented then and there with examples.

```
%%      Define student-specific information here
\SetTitle{Title of the Thesis}% Write the title of your thesis here
\SetAuthor{Name}% Write your name to be displayed here
\SetIndexNum{Index number}% Write your index number. For example: ASXXXXXXX
\SetThesisDate{Date}% Set the submission date. For example: December,2020
\SetDepartment{Department name}% Write only the name of the Department. For example: Statistics. Do not write
Department of Statistics.
\SetDegree{Degree}% For example: BSc (Honors) Statistics
\SetCourseCode{Course Code}% For example: STA XXX X.X
\SetSupervisor{Main Supervisor's name}% Write the name of the main supervisor with the title (Prof., Dr. so on)

%If multiple supervisors are involved, enter their details here:
\SetSupervisorTwo{2nd Supervisor's name}% Write the name of the second supervisor with the title (Prof., Dr. so
on)
\SetSupervisorInstituteTwo{2nd Supervisor's Institute\\ Address Line 1\\ Address Line 2}% Write the name of the
2nd supervisor's institute. You may use \\ to go to a new line.
\SetSupervisorThree{3rd Supervisor's name}% Write the name of the third supervisor with the title (Prof., Dr. so
on)
\SetSupervisorInstituteThree{3rd Supervisor's Institute\\ Address Line 1\\ Address Line 2}% Write the name of the
third supervisor's institute. You may use \\ to go to a new line.
```

Figure 11: Adding the student and supervisor details

Figure 12 shows the heart of the main document which is the main content, where the user calls all the chapters in order.

```
122     %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
123     %%                    Main Content                              %%
124     %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
125 %%      add your chapters here
126     \input{THESIS/Chapters/Chapter1}
127
128     \input{THESIS/Chapters/Chapter2}
129
130     \input{THESIS/Chapters/Chapter3}
131
132     \input{THESIS/Chapters/Chapter4}
133
134     \input{THESIS/Chapters/Chapter5}
135
136     \input{THESIS/Chapters/Chapter6}
137
138
```

Figure 12: Calling the chapters

Figure 13 reveals the way of calling the bibliography file in the main document. It enables the user to set the style preferred. In this template, it has followed the most general APA style, but you may change it as per the requirement.

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%                    Bibliography                                    %%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
\bibHeading{References}
%\nocite{*}
\bibliography{BibFile}
\bibliographystyle{apalike} %%      you may give the preferred style

```

Figure 13: Calling Bibliography in the main document

Figure 14 reveals the way of calling the appendix or appendices in the main document.

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%                    Appendix                                        %%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%      add your appendices here
\input{THESIS/Appendices/AppendixA}
\input{THESIS/Appendices/AppendixB}

```

Figure 14: Calling Appendices in the main document

2.7 Files to be kept unchanged

- USJPStatThesis.cls file
- SJPLogo.jpg file