

# Introduction

This document serves as a template for the creation of standalone documents, which are designed to be compiled and seamlessly integrated into the documentation web-page.

Adherence to specific guidelines is essential to ensure that the end product presents well and that all embedded hyperlinks function correctly.

## Structure

First, make sure that your TeX file is organized as follows:

```
% !TeX document-id = {fb298762-8474-4a7b-90a0-a0c749091c0f}
%!BIB program = biber
\documentclass[12pt,twoside]{../../mitthesis}
\input{../../packages.tex}
\begin{document}
YOUR CONTENT GOES HERE
\end{document}
```

## Sections and subsections

Sections and subsections can be delineated using the following commands:

```
\section*{...} \subsection*{...}
```

For example, this section was initiated with:

```
\section*{Sections and subsections}
```

And the subsequent subsection was generated with

```
\section*{Links. Sections and subsections}
```

It is important to use the asterisk `*` with these commands, such as `\section*{...}` or `\subsection*{...}`, to prevent the automatic numbering of sections.

## Links. Sections and subsections

When creating hyperlinks, it is advisable to use the `\hyperlink` command to ensure optimal functionality on the website. For instance, to create a hyperlink to current subsection, one would use:

```
\hyperlink{links-sections-and-subsections}{current subsection}
```

Similarly, to link to the previous subsection:

```
\hyperlink{sections-and-subsections}{previous subsection}
```

Although these links will not be functional within a PDF, they will operate correctly on the website. For accurate linking, follow these steps:

- Identify the name of the section or subsection to which you wish to link, such as

Links. Sections and subsections

- Strip all punctuation from it to yield

Links Sections and subsections

- Convert the text to lowercase:

links sections and subsections

- Replace spaces with hyphens to form the link identifier:

links-sections-and-subsections

- Insert this identifier into the first argument of the `\hyperlink` command:

```
\hyperlink{links-sections-and-subsections}{a hyperlinked text}
```

## Tables

You can define your table by utilizing `table` environment:

```
\begin{table}[H]
  \caption{Table caption}
  \label{table:my-table}
  \begin{tabularx}{0.97\textwidth}{|p{0.3\textwidth}|p{0.6\textwidth}|}
    \hline
    $$Q$ & Quality function \\
    $$r$ & Running objective \\
    \hline
  \end{tabularx}
\end{table}
```

Table 1: Table caption

$Q$	Quality function
$r$	Running objective

## Referencing to tables.

To reference a specific table, such as Table 1, simply use the command

```
\ref{table:my-table}
```

## Equations

You can define your equation by utilizing `equation` environment. Thus, the code

```
\begin{equation}
  \label{eqn_sysmarkov}
  \begin{aligned}
    & \& \text{State}_{t+1} \sim \text{transit}(\text{bullet} \text{ vert } \text{state}_t, \text{action}_t)
  \end{aligned}
\end{equation}
```

```

\end{aligned}
\end{equation}

```

provides us

$$S_{t+1} \sim p(\bullet | s_t, a_t) \quad (1)$$

The dollar sign symbol \$ is also supported for denoting equations. For instance, writing `$x^2$` will yield the mathematical expression  $x^2$ .

## Referencing to equations

To reference to a specific equation, such as (1), you can use

```
\eqref{eqn_sysmarkov}
```

**Please note that it is imperative to prefix your label with eqn for equation references!**

## Algorithms

You can define your algorithm by utilizing `algorithm` environment. Thus, the code

```

\begin{algorithm}
\caption{My awesome algorithm}
\label{alg:my-alg}
\begin{algorithmic}
\STATE {\bfseries Input:} $\theta_0$
\FOR {Learning iteration $i := 0 \dots \mathcal{I}$}
  \STATE Policy weight update
  \STATE $\theta_{i+1}$ \la $ long equation
  \STATE $\alpha_i > 0$, learning rate
\ENDFOR
\STATE \RETURN Optimal policy $\hat{\pi}_{\theta_{\mathcal{I}}}$
\end{algorithmic}

```

```
\end{algorithm}
```

provides us

**Algorithm 1:** My awesome algorithm

```
Input:  $\theta_0$   
for Learning iteration  $i := 0 \dots \mathcal{I}$  do  
  Policy weight update  
   $\theta_{i+1} \leftarrow$  long equation  
   $\alpha_i > 0$ , learning rate  
end for  
  
return Optimal policy  $\pi^{\theta_{\mathcal{I}}}$ 
```

## Referencing to algorithms

To reference to a specific algorithm, such as 1, you can use

```
\ref{alg:my-arg}
```

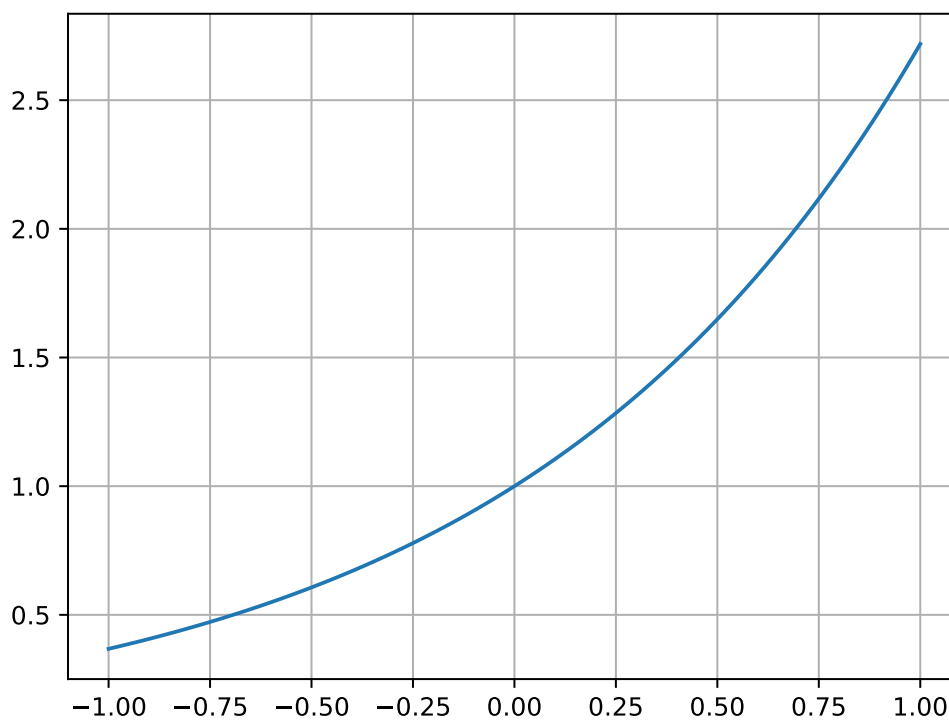
## Figures

You can define your figure by utilizing `figure` environment. Thus, the code

```
\begin{figure}[H]  
  \caption{My awesome figure!!!}  
  \label{fig:my-fig}  
  \includegraphics{img.pdf}  
\end{figure}
```

provides us

Figure 1: My awesome figure!!!



Please ensure that the file `pic.pdf` is located within the `docs/tex/gfx` directory, as indicated by the path: `docs/tex/gfx/pic.pdf`

## Referencing to figures

To reference to a specific figure, such as 1, you can use

```
\ref{fig:my-fig}
```

## Citing

To reference a particular source within your document, use the command

```
\cite{Astroem2000Modeluncertain}
```

which will appear as [Åst00].

Remember to include the command `\printbibliography` at the conclusion of your document; this is crucial for compiling the bibliography section.





# Bibliography

- [Åst00] K. Åström. “Model uncertainty and robust control”. In: *Lecture Notes on Iterative Identification and Control Design* (2000), pp. 63–100.