

# Introduction to the AUTtheme for R Markdown with Beamer

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# Overview

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## How to load this package

Load this package from github using the `remotes` package

In R Studio

- File/New File/R Markdown/From Template
- Select AUTBeamer

This will create a new directory containing the required files to run the template

- `bgImages` (folder containing images)
- `AUTtheme.sty`
- `header.tex`
- `untitled.Rmd`

## Compiling this demo file

To compile this demo file, this file needs to be located in the same directory as the `bgImages` folder and the `AUTtheme.sty` file. These files are not provided in the demo folder to avoid duplication.



## Compiling with AUTTheme

`lualatex` is recommended.

## Comparison to Beamer version

The Rmd version of this template does not yet have all the functionality of the beamer version, e.g. customised frame environments such as sectionpages.



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## Frame Sizes

The template can be used to create  $16 \times 9$  or  $4 \times 3$  slides by modifying the YAML header.

The resolution of the background images get updated automatically.

- To create  $16 \times 9$  slides use classoption: "aspectratio=169"
- To create  $4 \times 3$  slides use classoption: "aspectratio=43"

## Customisation

The file `header.tex` contains the LaTeX commands used at the start of the document.

To use the AUTtheme package, `header.tex` needs to contain, a command like:

- `\usepackage{AUTtheme}` or
- `\usepackage[dct]{AUTtheme}`

The `header.tex` file can also be used to load other packages or customise the Beamer package in other ways, e.g.

```
\AtBeginSection{}
```

or

```
usepackage{lipsum}
```

# Outlines

Sections are defined by #, subsections by ## and slides by ###. The `slide_level` can be defined in the YAML header.

An outline of all sections can be created by adding:

```
\tableofcontents[hideallsubsections]
```



# Overview - Example 1

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## \AtBeginSection

In `AUTtheme.sty` the default is that each section starts:

- with a title slide containing the section name
- an outline slide with the following specification

```
\tableofcontents[  
    currentsubsection,  
    sectionstyle=show/shaded,  
    subsectionstyle=show/shaded/hide,  
]
```

## Customising \AtBeginSection

This can be customised in `header.tex`. For example, as shown in the header file for this demo

```
\AtBeginSection{  
  \begin{sectionframe}  
  \frametitle{Outline}  
  \tableofcontents[  
    currentsection,  
    sectionstyle=show/shaded,  
    subsectionstyle=show/show/hide,  
  ]  
  \end{sectionframe}}
```





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# Unordered list

- Bullet 1
  - sub Bullet
    - sub of sub Bullet
  - sub Bullet
- Bullet 2
- Bullet 3

# Ordered list

## 1. Item 1

- Item 1a
- Item 1b

## 2. Item 2

## 3. Item 3

- Item 3a
- Item 3b

## List with steps showing

1. Item 1

## List with steps showing

1. Item 1
2. Item 2

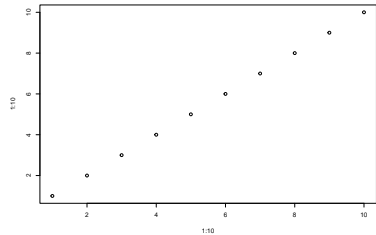
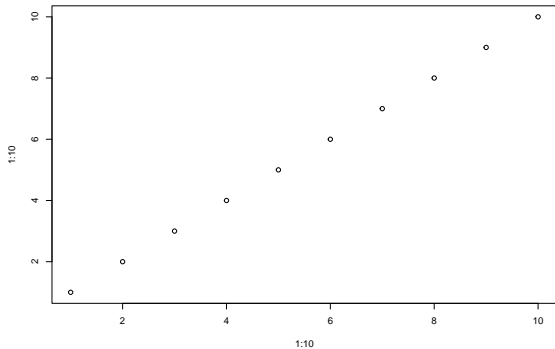


## List with steps showing

1. Item 1
2. Item 2
3. Item 3

# Columns

Column 1



Column 2

## Tables

Assessment	Weighting	Hand out	Hand in
Quizzes	15%	Weekly	Weekly
Assignment	25%	Week 6	Week 8
Project	60%	Week 4	Week 12
Total	100%		





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## Overlays

This appears on all slides.



## Overlays

This appears on all slides. **This only appears on slide 2**



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## Footnotes

There is a really good book about geometric processes.<sup>1</sup> There is also a really good book about stochastic processes.<sup>2</sup>

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<sup>1</sup>Lam, Yeh. The Geometric Process and Its Applications. World Scientific, Hackensack, NJ, 2007.

<sup>2</sup>Ross, Sheldon. Stochastic Processes, 1998.

## References

Buehler et al. (2019) discusses the importance of Deep Hedging. Many authors have applied machine learning (Teichmann 2019). Multiple authors can be separated with semicolon (Buehler et al. 2019; Teichmann 2019).

- @buehler2019deep gives in text references
- [@buehler2019deep] gives the reference in parentheses
- [@buehler2019deep; @teichmann2019machine] multiple authors



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**LaTeX Commands**

Protecting LaTeX commands

Example - Blocks

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## Protecting LaTeX commands

The following environment can be used to protect raw latex code (see source)

A B

A B



## Example - Blocks

For more information see

<https://bookdown.org/yihui/rmarkdown-cookbook/custom-blocks.html>

This paragraph will be centered on the page, and its width is 50% of the width of its parent element.



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## References

- Buehler, Hans, Lukas Gonon, Josef Teichmann, and Ben Wood. 2019. "Deep Hedging." *Quantitative Finance* 19 (8): 1271–91.
- Teichmann, Josef. 2019. "Machine Learning in Finance." URL: [https://People.Math.Ethz.Ch/Jteichma/Index.Php](https://People.Math.Ethz.ch/~jteichma/Index.Php).