Metropolis

A modern beamer theme

Matthias Vogelgesang

November 2, 2019

Center for modern beamer themes
Introduction

Title formats

Elements

Conclusion
Introduction
The **METROPOLIS** theme is a Beamer theme with minimal visual noise inspired by the hsrm Beamer Theme by Benjamin Weiss.

Enable the theme (in \LaTeX) by loading

\begin{verbatim}
\documentclass{beamer}
\usetheme{metropolis}
\end{verbatim}

Note, that you have to have Mozilla’s *Fira Sans* font and XeTeX installed to enjoy this wonderful typography.

In R you can of course use this package directly, see its documentation.
Sections group slides of the same topic

## Elements

for which **METROPOLIS** provides a nice progress indicator ...
Title formats
**Metropolis title formats**

Metropolis supports 4 different title formats:

- Regular
- **Small caps**
- **All small caps**
- **All caps**

They can either be set at once for every title type or individually.
Elements
The theme provides sensible defaults to \emph{emphasize} text, \alert{accent} parts or show \textbf{bold} results.

becomes

The theme provides sensible defaults to 
emphasize text, accent parts or show bold results.
Font feature test

- Regular
- *Italic* (also *Italic*)
- SMALL CAPS
- **Bold** (also **Bold**)
- *Bold Italic* (also *Italic*)
- **BOLD SMALL CAPS**
- Monospace
- Monospace *Italic*
- Monospace **Bold**
- Monospace **Bold Italic**
## Lists

<table>
<thead>
<tr>
<th>Items</th>
<th>Enumerations</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Milk</td>
<td>1. First,</td>
<td><strong>PowerPoint</strong></td>
</tr>
<tr>
<td>• Eggs</td>
<td>2. Second and</td>
<td><strong>Beamer</strong> Yeeeha.</td>
</tr>
<tr>
<td>• Potatoes</td>
<td>3. Last.</td>
<td></td>
</tr>
</tbody>
</table>
This uses \LaTeX{} for animation. The next slides uses RMarkdown

\begin{itemize}
\item This is important
\end{itemize}
This uses \LaTeX\ for animation. The next slides uses RMarkdown

- This is important
- Now this
• This is important
• Now this
• And now this

This uses LaTeX for animation. The next slides uses RMarkdown
- This is really important
- Now this
- And now this

This uses \LaTeX{} for animation. The next slides uses RMarkdown
Animation (using RMarkdown, plus one $\LaTeX$ trick)

- This is important
Animation (using RMarkdown, plus one \LaTeX\ trick)

- This is important
- Now this
Animation (using RMarkdown, plus one \LaTeX trick)

• This is important
• Now this
• And now this
• This is really important
• Now this
• And now this
**Figure 1:** Rotated square from texample.net.

This used a \LaTeX feature. All RMarkdown features are also at our disposal.
**Table 1:** Largest cities in the world (source: Wikipedia)

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico City</td>
<td>20,116,842</td>
</tr>
<tr>
<td>Shanghai</td>
<td>19,210,000</td>
</tr>
<tr>
<td>Peking</td>
<td>15,796,450</td>
</tr>
<tr>
<td>Istanbul</td>
<td>14,160,467</td>
</tr>
</tbody>
</table>

This used a \LaTeX{} feature. All RMarkdown features are also at our disposal.
Three different block environments are pre-defined and may be styled with an optional background color.

**Default**
Block content.

**Alert**
Block content.

**Example**
Block content.

The right side uses the `\metroset{block=fill}` option. Blocks can also be used in Markdown using `###` (if slide-level=2).
\[ e = \lim_{n \to \infty} \left(1 + \frac{1}{n}\right)^n \]
Bar charts

![Bar chart image]

Legend:
- lorem
- ipsum
- dolor

Axes:
- Y-axis: Bar
- X-axis: Foo

Data points:
- Bar 1: Lorem 20, Ipsum 18, Dolor 5
- Bar 2: Lorem 25, Ipsum 24, Dolor 17
- Bar 3: Lorem 22, Ipsum 23, Dolor 19
- Bar 4: Lorem 15, Ipsum 14, Dolor 12
Veni, Vidi, Vici
Some references (Knuth, 1992; Graham et al., 1989; Simpson, 2003; Erdős, 1995; Greenwade, 1993)

allowframebreaks is not used or needed, also changed \cite to \citep, and defaulted natbib to option [round].
Notes can be added either using latex syntax:

```
\note{
  \begin{itemize}
    \item \textbf{This} is a note.
  \end{itemize}
}
```

or with pandoc (markdown) syntax:

```
<dir class = "notes">
  - This is *another* note.
</dir>
```

The display of the notes is controlled using the YAML argument `beameroption`. Here we have used `beameroption: "show notes"`. 
• *This* is a note.

• This is another note.
Conclusion
Get the source of this theme and the demo presentation from

https://github.com/matze/mtheme

The theme itself is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

Source and documentation for the RMarkdown variant are at
Questions?
Sometimes, it is useful to add slides at the end of your presentation to refer to during audience questions.

The best way to do this is to include the \texttt{appendixnumberbeamer} package in your preamble and call \texttt{\appendix} before your backup slides.

\textbf{METROPOLIS} will automatically turn off slide numbering and progress bars for slides in the appendix.

Calling \texttt{\appendix} currently leads to an error in when using \texttt{binb}.
The following code generates the plot on the next slide (taken from help(bxp) and modified slightly):

```r
library(stats)
set.seed(753)
bx.p <- boxplot(split(rt(100, 4),
                 gl(5, 20)), plot=FALSE)
bxp(bx.p, notch = FALSE, boxfill = "lightblue",
     frame = FALSE, outl = TRUE,
     main = "Example from help(bxp)"
)
```
A simple `knitr::kable` example:

```r
knitr::kable(mtcars[1:5, 1:8],
             caption="(Parts of) the mtcars dataset")
```

### Table 2: (Parts of) the mtcars dataset

<table>
<thead>
<tr>
<th></th>
<th>mpg</th>
<th>cyl</th>
<th>disp</th>
<th>hp</th>
<th>drat</th>
<th>wt</th>
<th>qsec</th>
<th>vs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mazda RX4</td>
<td>21.0</td>
<td>6</td>
<td>160</td>
<td>110</td>
<td>3.90</td>
<td>2.620</td>
<td>16.46</td>
<td>0</td>
</tr>
<tr>
<td>Mazda RX4 Wag</td>
<td>21.0</td>
<td>6</td>
<td>160</td>
<td>110</td>
<td>3.90</td>
<td>2.875</td>
<td>17.02</td>
<td>0</td>
</tr>
<tr>
<td>Datsun 710</td>
<td>22.8</td>
<td>4</td>
<td>108</td>
<td>93</td>
<td>3.85</td>
<td>2.320</td>
<td>18.61</td>
<td>1</td>
</tr>
<tr>
<td>Hornet 4 Drive</td>
<td>21.4</td>
<td>6</td>
<td>258</td>
<td>110</td>
<td>3.08</td>
<td>3.215</td>
<td>19.44</td>
<td>1</td>
</tr>
<tr>
<td>Hornet Sportabout</td>
<td>18.7</td>
<td>8</td>
<td>360</td>
<td>175</td>
<td>3.15</td>
<td>3.440</td>
<td>17.02</td>
<td>0</td>
</tr>
</tbody>
</table>


