Advanced YAML settings

COMMUNICATING WITH DATA IN THE TIDYVERSE

Timo Grossenbacher
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YAML

```
---
receipt:     Oz-Ware Purchase Invoice
date:        2012-08-06
customer:
    first_name:   Dorothy
    family_name:  Gale
---
```

[1] Taken from Wikipedia (https://en.wikipedia.org/wiki/YAML#Example)

YAML headers in RMarkdown documents

```
---
title: "The reduction in weekly working hours in Europe"
subtitle: "Looking at the development between 1996 and 2006"
author: "Timo Grossenbacher"
output:
    html_document:
        theme: paper
        highlight: tango
```

```
    pdf_document:
        ...
---
```

Many more configuration options in this **RMarkdown reference**!

Let's customize your report!

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Custom stylesheets

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Cascading Style Sheets (CSS): Basic selectors

```
<h2>Summary</h2>

<p>The <strong>International
Labour Organization (ILO)</strong>
has many
<a href="http://test.htm">data sets
</a> on working conditions.
```

```
h2 {
  font-family: "Bookman", serif;
}
```

```
body, h1, h2 {
  font-family: "Bookman", serif;
}
strong {
    color: "red";
}
a {
    color: #0000FF;
    font-weight: bold;
}
```

Cascading Style Sheets (CSS): Class selectors

```
<h2>Strong elements</h2>

Here are two <strong class = "red">
bold</strong>
<strong>elements</strong>.
```

```
strong {
  color: "blue";
}
strong.red {
  color: "red";
}
```

Cascading Style Sheets (CSS): Combinators

```
<div>

  <p>
    This is a
    <strong>bold element</strong>
    inside a paragraph
  </p>

  This is another
  <strong>bold element</strong>
  outside a paragraph.

</div>
```

```
div strong {
  color: "green";
}
div > strong {
  color: "red";
}
```

Find many more selectors and a full CSS reference on the **Mozilla Developer Network**.

Let's practice!

COMMUNICATING WITH DATA IN THE TIDYVERSE

Beautiful tables

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```
# Some summary statistics
ilo_data %>%
  group_by(year) %>%
  summarise(mean_hourly_compensation = mean(hourly_compensation),
            mean_working_hours = mean(working_hours))
```

```
## # A tibble: 27 x 3
##       year mean_hourly_compensation mean_working_hours
##     <fctr>                    <dbl>              <dbl>
##  1   1980                 9.267500           33.98103
##  2   1981                 8.692500           33.61923
##  3   1982                 8.355000           33.47409
##  4   1983                 7.809091           33.86589
##  5   1984                 7.543636           33.71051
##  6   1985                 7.786364           33.73358
##  7   1986                 9.700000           33.97494
##  8   1987                12.146923           33.58138
##  9   1988                13.199231           33.66441
## 10   1989                13.136154           33.53312
## # ... with 17 more rows
```

As can be seen from the above table, the average weekly working hours of European countries have been descreasing since 1980.

```
# Some summary statistics
ilo_data %>%
  group_by(year) %>%
  summarise(mean_hourly_compensation = mean(hourly_compensation),
            mean_working_hours = mean(working_hours))
```

```
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##      year mean_hourly_compensation mean_working_hours
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##  1   1980                 9.267500           33.98103
##  2   1981                 8.692500           33.61923
##  3   1982                 8.355000           33.47409
##  4   1983                 7.809091           33.86589
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##  6   1985                 7.786364           33.73358
##  7   1986                 9.700000           33.97494
##  8   1987                12.146923           33.58138
##  9   1988                13.199231           33.66441
## 10   1989                13.136154           33.53312
## # ... with 17 more rows
```

YAML header to the rescue!

```
---
title: "The reduction in weekly working hours in Europe"
subtitle: "Looking at the development between 1996 and 2006"
author: "Timo Grossenbacher"
output:
  html_document:
    theme: cosmo
    highlight: monochrome
    toc: true
    toc_float: false
    toc_depth: 4
    code_folding: hide
    css: styles.css
    df_print: kable
---
```

The second option

```
# Some summary statistics
ilo_data %>%
  filter(country == "Switzerland" & year > 2000) %>%
  knitr::kable()
```

country	year	hourly_compensation	working_hours
Switzerland	1980	10.960000	34.70385
Switzerland	1981	10.010000	34.33462
Switzerland	1982	10.310000	34.12308
Switzerland	1983	10.330000	33.84231
Switzerland	1984	9.520001	33.47885

Styling tables

```
<table>
  <thead>
    ...
  </thead>
  <tbody>
    ...
  </tbody>
</table>
```

Styling tables

```
<table>
  <thead>
   <tr>
     ...
   </tr>
  </thead>
  <tbody>
   <tr>
     ...
   </tr>
   <tr>
     ...
   </tr>
  </tbody>
</table>
```

Styling tables

```
<table>
  <thead>
   <tr>
     <th>Column 1</th><th>Column 2</th>
   </tr>
  </thead>
  <tbody>
   <tr>
     <td>Cell 1</td><td>Cell 2</td>
   </tr>
   <tr>
     ...
   </tr>
  </tbody>
</table>
```

Let's practice!

COMMUNICATING WITH DATA IN THE TIDYVERSE

Summary

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The reduction in weekly working hours in Europe

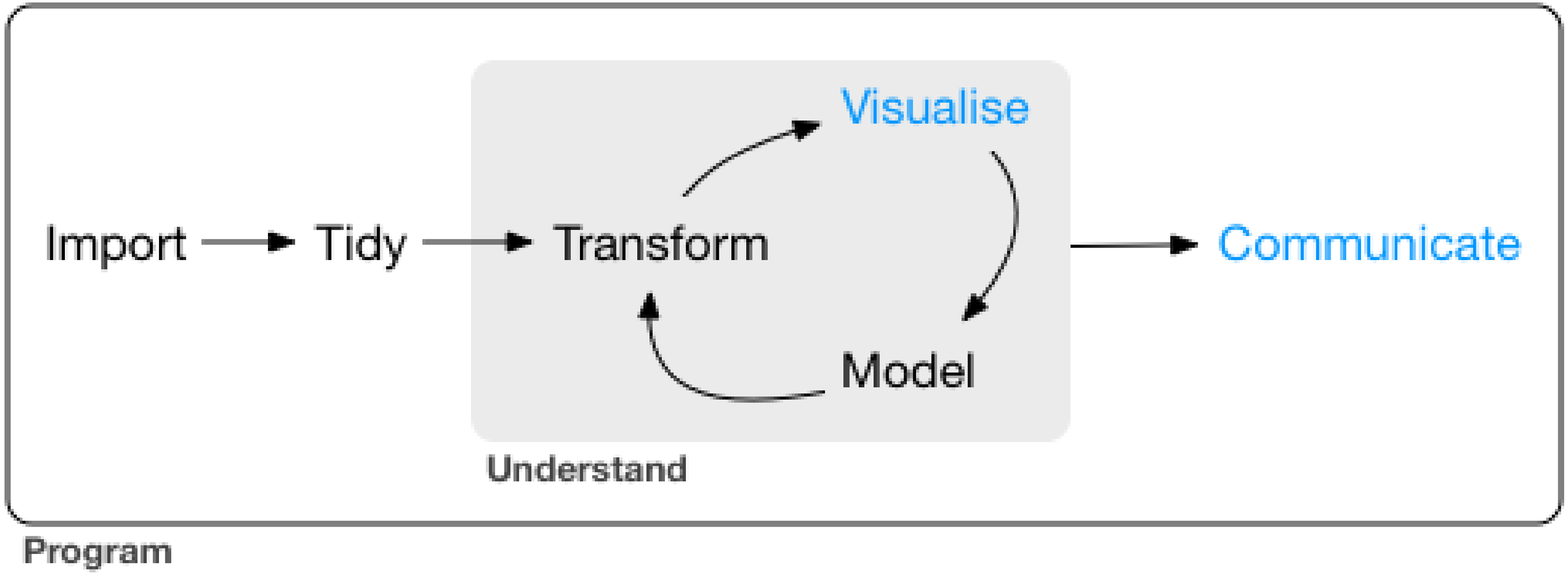
Code

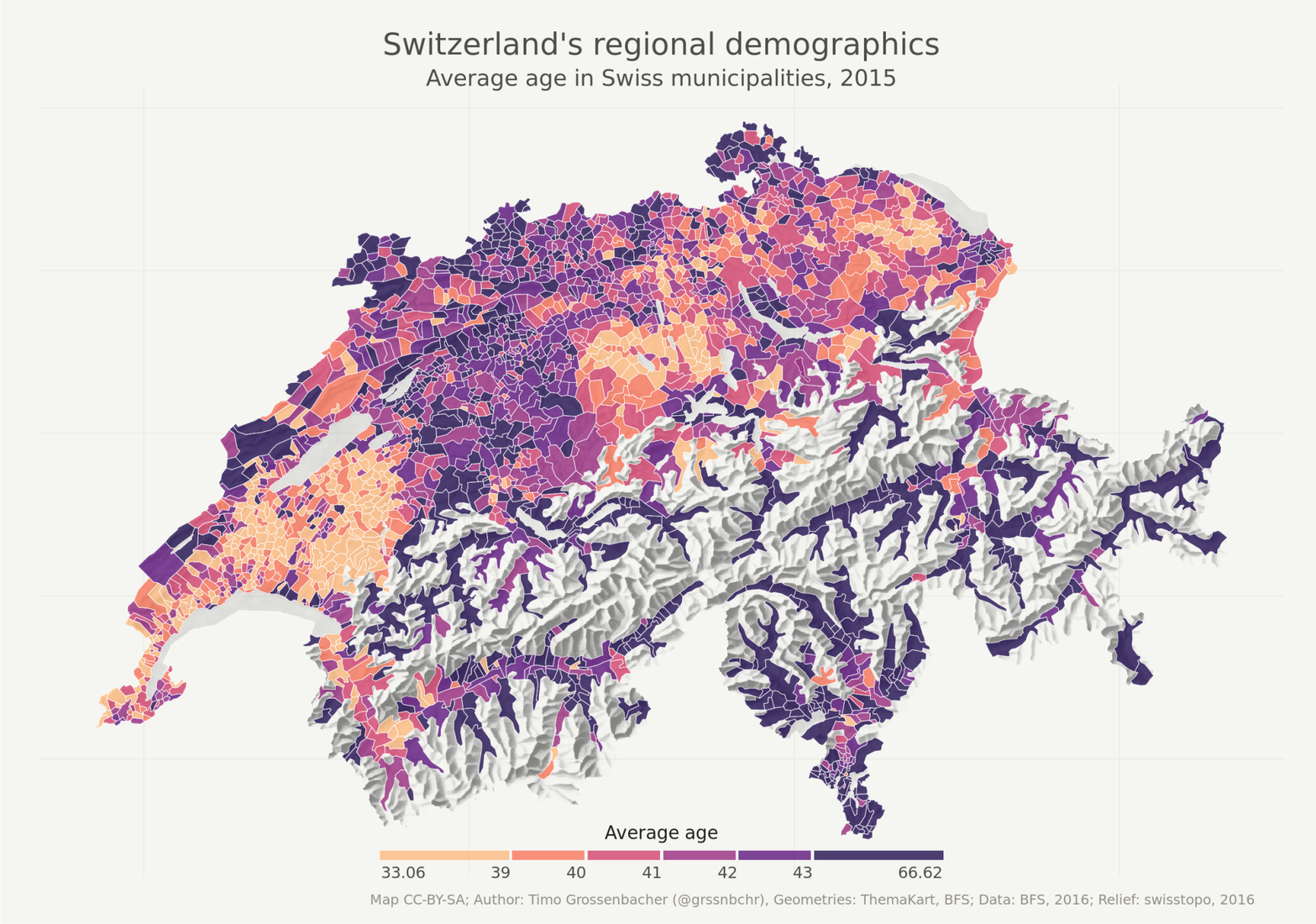
Looking at the development between 1996 and 2006

Timo Grossenbacher

Summary

The last step in the Tidyverse process





[1] timogrossenbacher.ch (https://timogrossenbacher.ch/2016/12/beautiful-thematic-maps-with-ggplot2-only/)

[1] Henrik Lindberg (https://gist.github.com/halhen/659780120accd82e043986c8b57deae0)

Next steps

- Track: **Data Visualization with R**
- Course: **Reporting with R Markdown**
- Course: **Building Web Applications with Shiny in R**

Congratulations!

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