Ministère
de la Justice

Reproducible Corporate Publications

WITH PAGEDOWN

Romain Lesur

Deputy Head of the
Statistical Service

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MINISTÈRE
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pagedown package

pagedown.rbind.io

- New and experimental package on top of {bookdown}/{rmarkdown} developed with **Yihui Xie** (RStudio)

  1st release: January 2019

- Aim of {pagedown}
  Paginate HTML documents from R Markdown using CSS

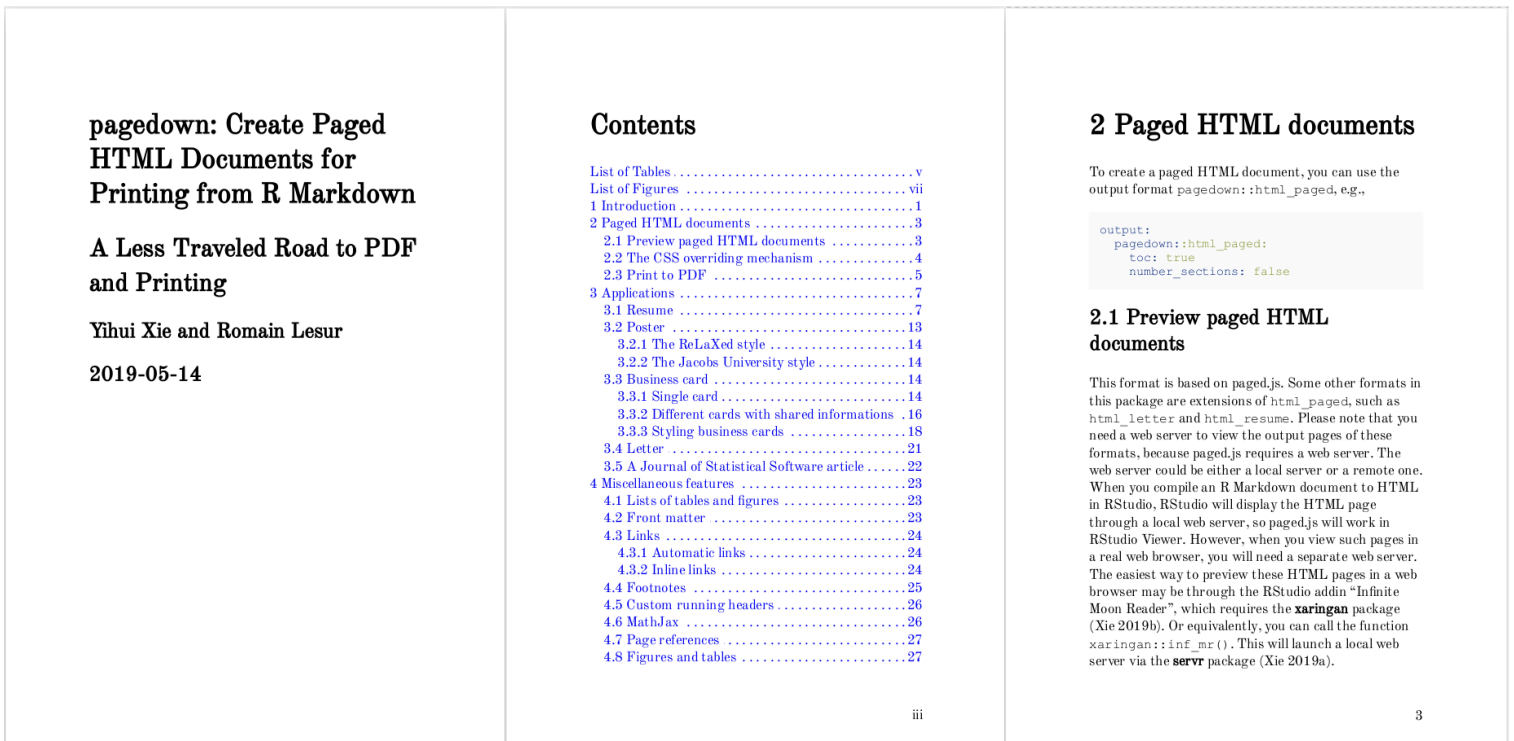
- Dedicated to R users who
  - are more comfortable with HTML/CSS than $\LaTeX$ or Word
  - need to customise their R Markdown documents

- For now, a few builtin templates

You also can make posters with {pagedown}, *outside the scope of this talk*.

Default template

`pagedown::html_paged()`



pagedown: Create Paged HTML Documents for Printing from R Markdown

A Less Traveled Road to PDF and Printing

Yihui Xie and Romain Lesur

2019-05-14

Contents

iii

2 Paged HTML documents

To create a paged HTML document, you can use the output format `pagedown::html_paged`, e.g.,

```
output:
  pagedown::html_paged:
    toc: true
    number_sections: false
```

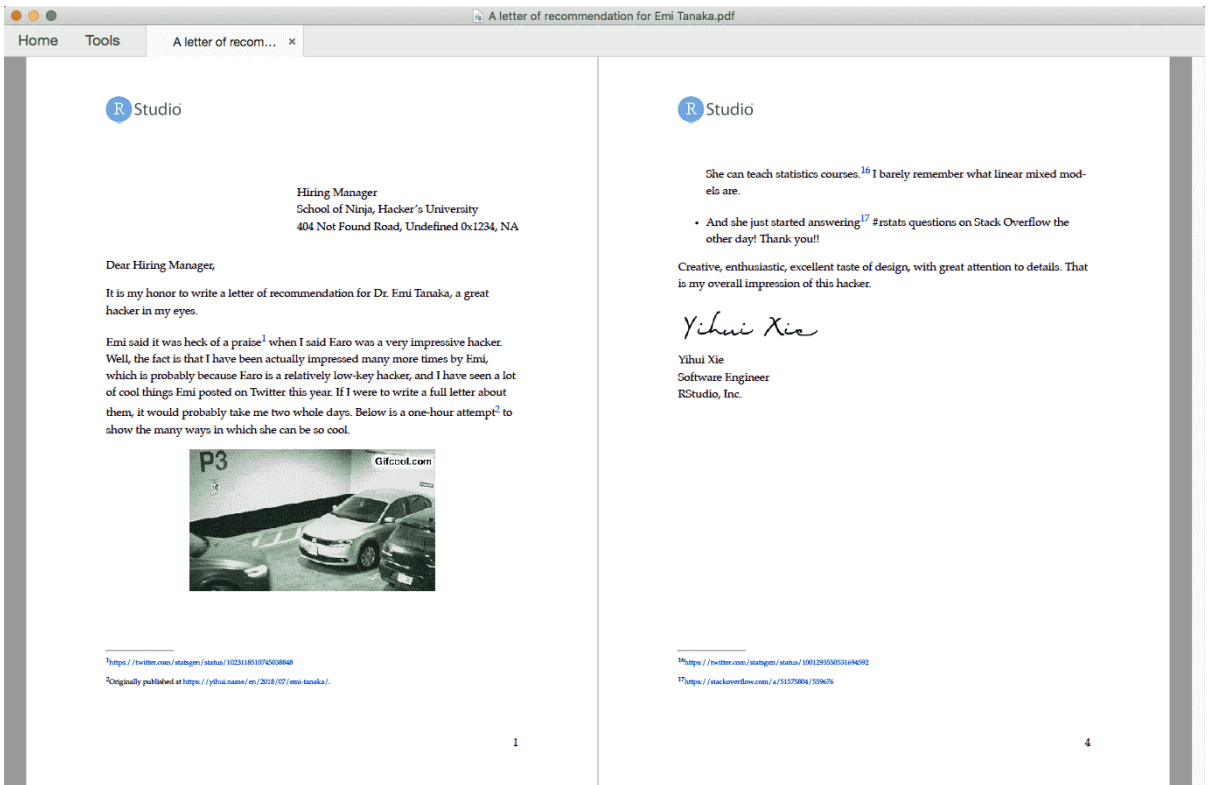
2.1 Preview paged HTML documents

This format is based on paged.js. Some other formats in this package are extensions of `html_paged`, such as `html_letter` and `html_resume`. Please note that you need a web server to view the output pages of these formats, because paged.js requires a web server. The web server could be either a local server or a remote one. When you compile an R Markdown document to HTML in RStudio, RStudio will display the HTML page through a local web server, so paged.js will work in RStudio Viewer. However, when you view such pages in a real web browser, you will need a separate web server. The easiest way to preview these HTML pages in a web browser may be through the RStudio addin "Infinite Moon Reader", which requires the **xaringan** package (Xie 2019b). Or equivalently, you can call the function `xaringan::inf_mr()`. This will launch a local web server via the **servr** package (Xie 2019a).

3

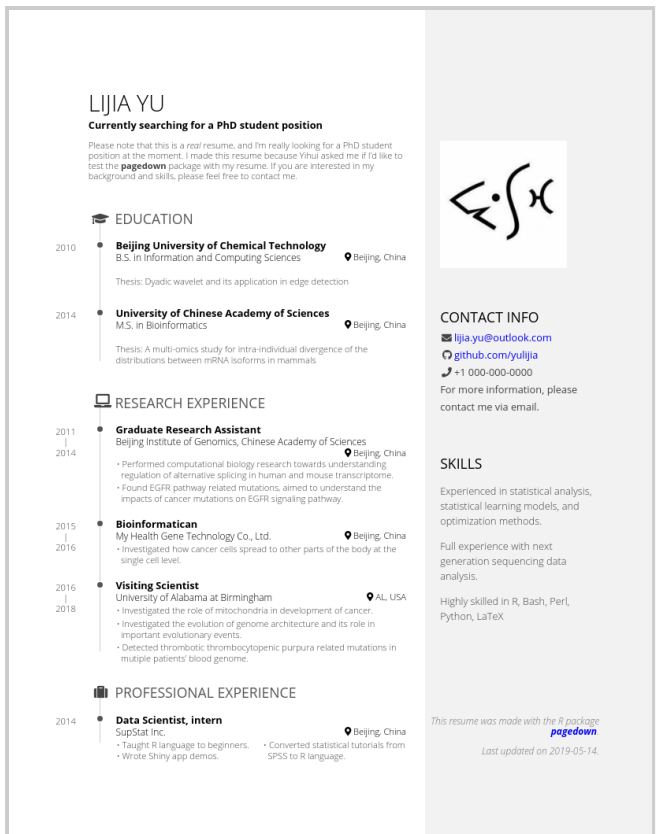
Letters

`pagedown::html_letter()`



Resume

`pagedown::html_resume()`



LIJIA YU

Currently searching for a PhD student position

Please note that this is a *real* resume, and I'm really looking for a PhD student position at the moment. I made this resume because Yihui asked me if I'd like to test the **pagedown** package with my resume. If you are interested in my background and skills, please feel free to contact me.

EDUCATION

2010 — **Beijing University of Chemical Technology**
B.S. in Information and Computing Sciences — Beijing, China

Thesis: Dyadic wavelet and its application in edge detection

2014 — **University of Chinese Academy of Sciences**
M.S. in Bioinformatics — Beijing, China

Thesis: A multi-omics study for intra-individual divergence of the distributions between mRNA isoforms in mammals

RESEARCH EXPERIENCE

2011 | 2014 — **Graduate Research Assistant**
Beijing Institute of Genomics, Chinese Academy of Sciences — Beijing, China

- Performed computational biology research towards understanding regulation of alternative splicing in human and mouse transcriptome.
- Found EGFR pathway related mutations, aimed to understand the impacts of cancer mutations on EGFR signaling pathway.

2015 | 2016 — **Bioinformatican**
My Health Gene Technology Co., Ltd. — Beijing, China

- Investigated how cancer cells spread to other parts of the body at the single cell level.

2016 | 2018 — **Visiting Scientist**
University of Alabama at Birmingham — AL, USA

- Investigated the role of mitochondria in development of cancer.
- Investigated the evolution of genome architecture and its role in important evolutionary events.
- Detected thrombotic thrombocytopenic purpura related mutations in mutiple patients' blood genome.

PROFESSIONAL EXPERIENCE

2014 — **Data Scientist, intern**
SupStat Inc. — Beijing, China

- Taught R language to beginners.
- Wrote Shiny app demos.
- Converted statistical tutorials from SPSS to R language.

CONTACT INFO

lijia.yu@outlook.com
github.com/yulijia
+1 000-000-0000
For more information, please contact me via email.

SKILLS

Experienced in statistical analysis, statistical learning models, and optimization methods.

Full experience with next generation sequencing data analysis.

Highly skilled in R, Bash, Perl, Python, LaTeX

This resume was made with the R package ***pagedown****.*

Last updated on 2019-05-14.

2015 | 2016 — **Bioinformatician**
My Health Gene Technology Co., Ltd. — Beijing, China

- Analyzed whole-exome sequencing data.
- Wrote analysis pipelines of ChIP-seq, single cell DNA-seq and single cell RNA-seq.
- Studied tumor metastasis and wrote research reports.
- Also did case studies to identify the genetic defect causing rare disease.

TEACHING EXPERIENCE

2014 — **Introduction to R Language for Beginners.**
Instructor of R and Data Mining Training Courses at SupStat Inc. — Beijing, China

2016 | 2017 — **Computational Biology and Bioinformatics.**
Teaching assistant of GBS CB2-201 courses at UAB — AL, USA

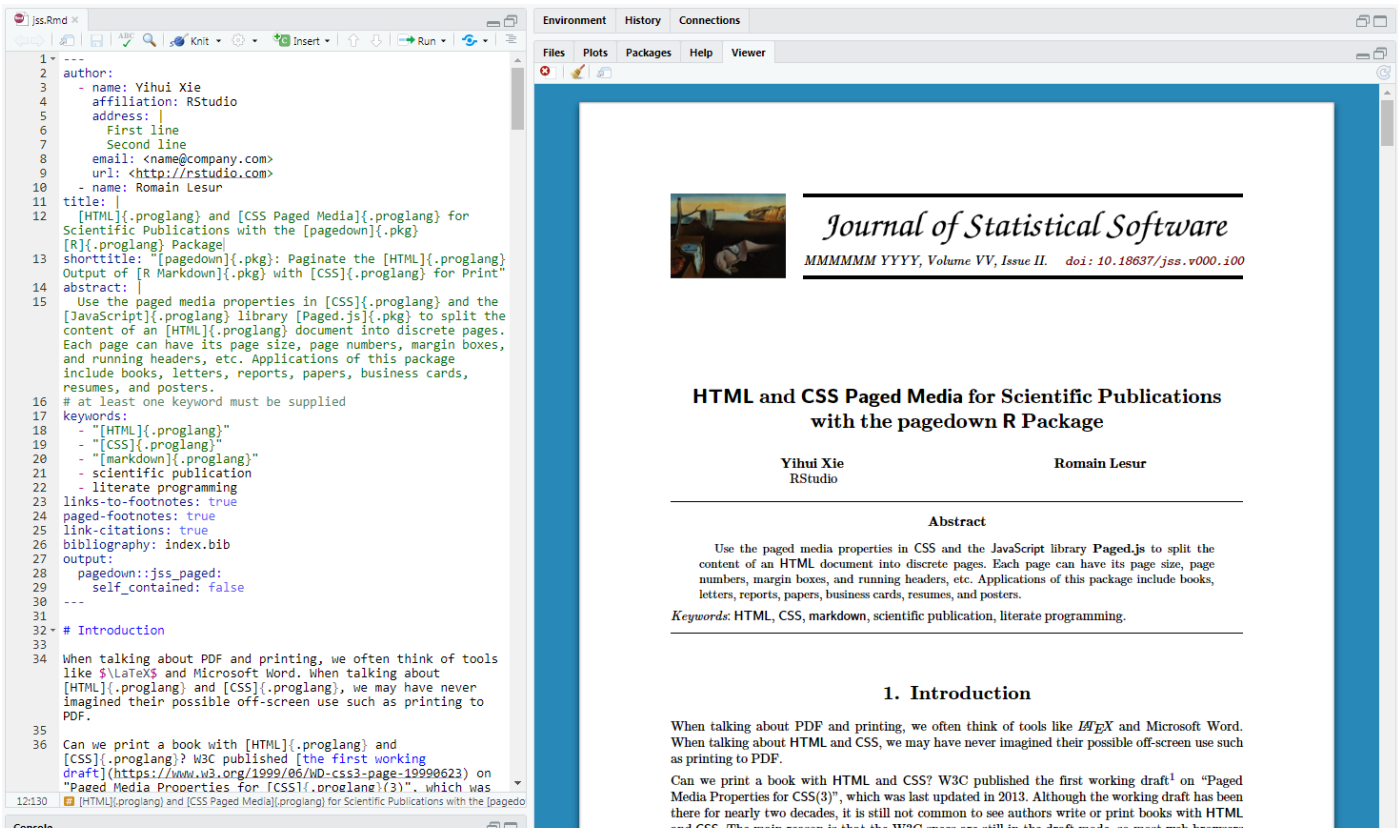
SELECTED PUBLICATIONS AND POSTERS

2014 — **Genetic and epigenetic signals are found predictive to the distribution of intra-individual divergence of alternative splicing.**
Poster for 2013 International Conference of Genomics — Qingdao, China
Yu L, Chen B, Zhang Z.

2016 — **ESCRT-0 complex modulates Rbf mutant cell survival by regulating Rhomboid endosomal trafficking and EGFR signaling.**
J Cell Sci. 2016 May 15;129(10):2075-84.
Sheng Z, **Yu L**, Zhang T, Pei X, Li X, Zhang Z and Du W.

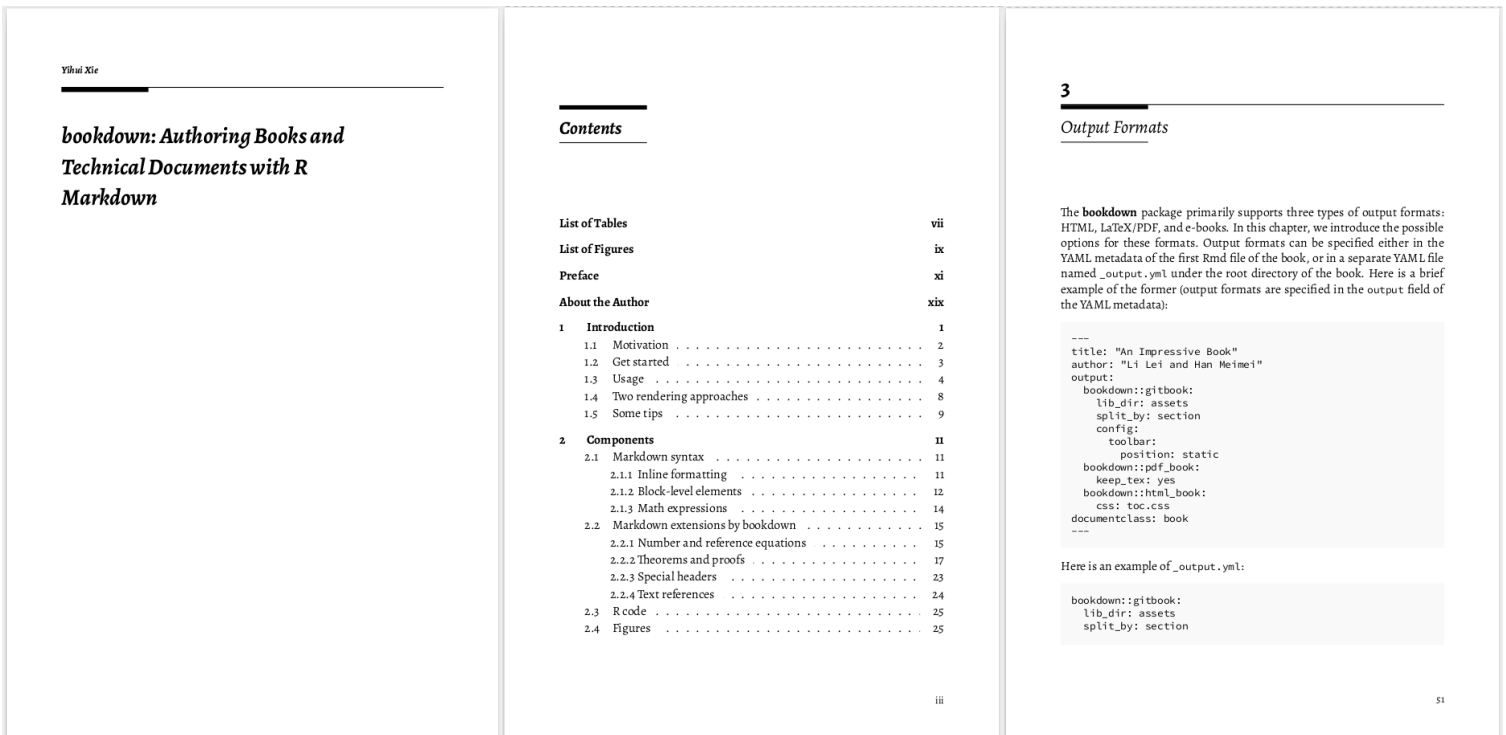
Scientific article

`pagedown::jss_paged()`



Chapman & Hall/CRC

`pagedown::book_crc()`



Yihui Xie

bookdown: Authoring Books and Technical Documents with R Markdown

Contents

iii

3

Output Formats

The **bookdown** package primarily supports three types of output formats: HTML, LaTeX/PDF, and e-books. In this chapter, we introduce the possible options for these formats. Output formats can be specified either in the YAML metadata of the first Rmd file of the book, or in a separate YAML file named `_output.yml` under the root directory of the book. Here is a brief example of the former (output formats are specified in the `output` field of the YAML metadata):

```
---
title: "An Impressive Book"
author: "Li Lei and Han Meimei"
output:
  bookdown::gitbook:
    lib_dir: assets
    split_by: section
    config:
      toolbar:
        position: static
  bookdown::pdf_book:
    keep_tex: yes
  bookdown::html_book:
    css: toc.css
documentclass: book
---
```

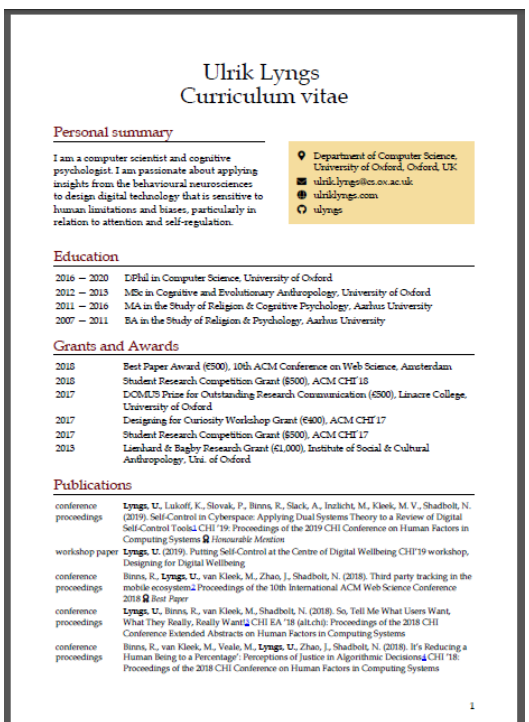
Here is an example of `_output.yml`:

```
bookdown::gitbook:
  lib_dir: assets
  split_by: section
```

51

Users' templates — Another resume

by Ulrik Lyngs



Ulrik Lyngs
Curriculum vitae

Personal summary

I am a computer scientist and cognitive psychologist. I am passionate about applying insights from the behavioural neurosciences to design digital technology that is sensitive to human limitations and biases, particularly in relation to attention and self-regulation.

Department of Computer Science, University of Oxford, Oxford, UK
ulrik.lyngs@cs.ox.ac.uk
ulriklyngs.com
ulyngs

Education

2016 – 2020 DPhil in Computer Science, University of Oxford
2012 – 2013 MSc in Cognitive and Evolutionary Anthropology, University of Oxford
2011 – 2016 MA in the Study of Religion & Cognitive Psychology, Aarhus University
2007 – 2011 BA in the Study of Religion & Psychology, Aarhus University

Grants and Awards

2018 Best Paper Award (€500), 10th ACM Conference on Web Science, Amsterdam
2018 Student Research Competition Grant ($500), ACM CHI'18
2017 DOMUS Prize for Outstanding Research Communication (£500), Linacre College, University of Oxford
2017 Designing for Curiosity Workshop Grant (€400), ACM CHI'17
2017 Student Research Competition Grant ($500), ACM CHI'17
2015 Lienhard & Bagby Research Grant (£1,000), Institute of Social & Cultural Anthropology, Uni. of Oxford

Publications

conference proceedings **Lyngs, U.**, Lukoff, K., Slovak, P., Binns, R., Slack, A., Inzlicht, M., Kleek, M. V., Shadbolt, N. (2019). Self-Control in Cyberspace: Applying Dual Systems Theory to a Review of Digital Self-Control Tools. CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. *Honourable Mention*

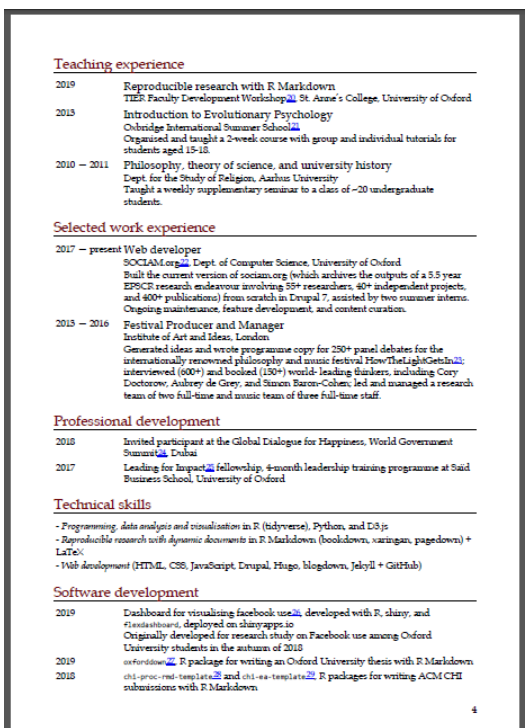
workshop paper **Lyngs, U.** (2019). Putting Self-Control at the Centre of Digital Wellbeing. CHI'19 workshop, Designing for Digital Wellbeing

conference proceedings Binns, R., **Lyngs, U.**, van Kleek, M., Zhao, J., Shadbolt, N. (2018). Third party tracking in the mobile ecosystem. Proceedings of the 10th International ACM Web Science Conference 2018. *Best Paper*

conference proceedings **Lyngs, U.**, Binns, R., van Kleek, M., Shadbolt, N. (2018). So, Tell Me What Users Want, What They Really, Really Want! CHI EA '18 (alt.chi): Proceedings of the 2018 CHI Conference Extended Abstracts on Human Factors in Computing Systems

conference proceedings Binns, R., van Kleek, M., Veale, M., **Lyngs, U.**, Zhao, J., Shadbolt, N. (2018). It's Reducing a Human Being to a Percentage': Perceptions of Justice in Algorithmic Decisions. CHI '18: Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems

1



Teaching experience

2019 Reproducible research with R Markdown
TIER Faculty Development Workshop. St. Anne's College, University of Oxford

2013 Introduction to Evolutionary Psychology
Oxbridge International Summer School.
Organised and taught a 2-week course with group and individual tutorials for students aged 15-18.

2010 – 2011 Philosophy, theory of science, and university history
Dept. for the Study of Religion, Aarhus University
Taught a weekly supplementary seminar to a class of ~20 undergraduate students.

Selected work experience

2017 – present Web developer
SOCIAM.org. Dept. of Computer Science, University of Oxford
Built the current version of sociam.org (which archives the outputs of a 5.5 year EPSCR research endeavour involving 55+ researchers, 40+ independent projects, and 400+ publications) from scratch in Drupal 7, assisted by two summer interns. Ongoing maintenance, feature development, and content curation.

2015 – 2016 Festival Producer and Manager
Institute of Art and Ideas, London
Generated ideas and wrote programme copy for 250+ panel debates for the internationally renowned philosophy and music festival HowTheLightGetsIn: interviewed (600+) and booked (150+) world- leading thinkers, including Cory Doctorow, Aubrey de Grey, and Simon Baron-Cohen; led and managed a research team of two full-time and music team of three full-time staff.

Professional development

2018 Invited participant at the Global Dialogue for Happiness, World Government Summit. Dubai

2017 Leading for Impact fellowship, 4-month leadership training programme at Saïd Business School, University of Oxford

Technical skills

- *Programming, data analysis and visualisation* in R (tidyverse), Python, and D3.js
- *Reproducible research with dynamic documents* in R Markdown (bookdown, xaringan, pagedown) + LaTeX
- *Web development* (HTML, CSS, JavaScript, Drupal, Hugo, blogdown, Jekyll + GitHub)

Software development

2019 Dashboard for visualising facebook use, developed with R, shiny, and `flexdashboard`, deployed on shinyapps.io
Originally developed for research study on Facebook use among Oxford University students in the autumn of 2018

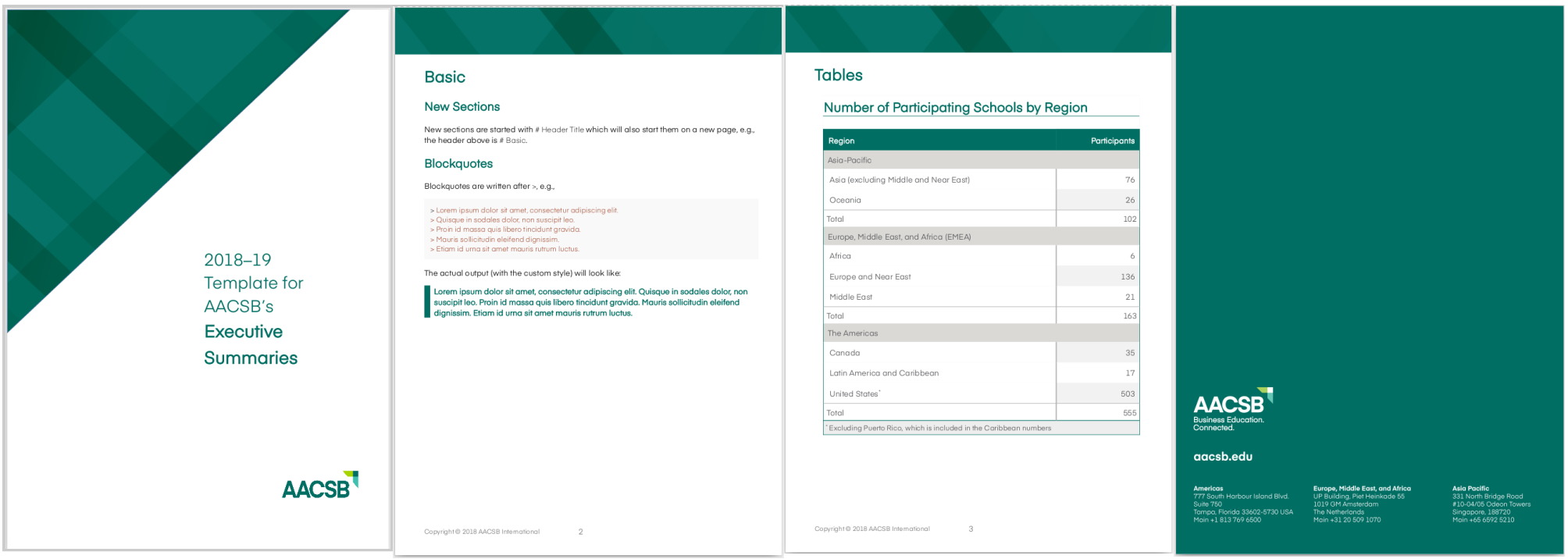
2019 `oxforddown`: R package for writing an Oxford University thesis with R Markdown

2018 `chi-proc-rmd-template` and `chi-ea-template`: R packages for writing ACM CHI submissions with R Markdown

4

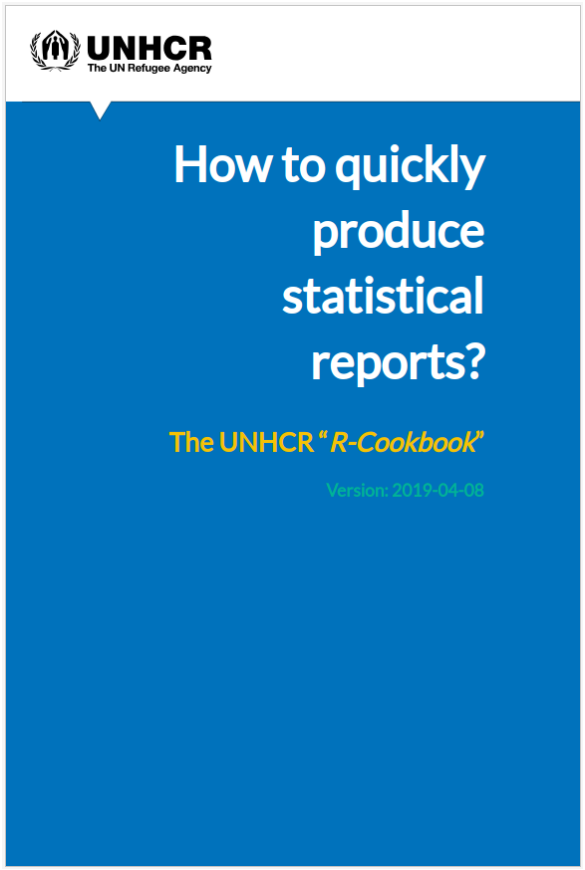
Users' templates — AACSB's Executive Summaries

by [Joshua David Barillas]



Users' templates — UNHCR

by [Edouard Legoupil]



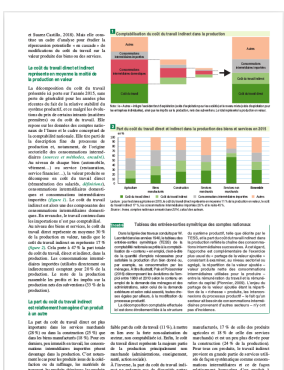
How pagedown works?

paged.js

- `pagedown::html_paged()` uses Paged.js
  a polyfill for CSS Paged Media
- Implements the support for CSS `@page` rules among others…
- You need a Chromium based browser (Chromium, Chrome, Brave…)
  why? see https://caniuse.com/#feat=css-paged-media

Limits

- **The same as your browser.** Example:
  multi-columns and an element which
  spans not on all columns



Want to implement your corporate design?

Some tips

- For now, use the dev version from GH
  `remotes::install_github('rstudio/pagedown')`
- Collaborate with your webmaster
- Basic knowledge of HTML/CSS is required
- Learn the basics of the Chrome Developer Tools
  developers.google.com/web/tools/chrome-devtools
- Read the Paged.js cheatsheet pagedmedia.org/paged-js
- Use web resources on CSS (SO, MDN, CSS Tricks…)
- Plan many tests
  and some meditation sessions
- Use a version control system, e.g. `git`
  or plan much more meditation sessions

Road map

Preview with **xaringan**'s *Infinite Moon Reader* `xaringan::inf_mr()`

`pagedown::html_paged()`
default stylesheets

```
---
title: "pagedown default template"
output:
  pagedown::html_paged:
    css:
    - default-fonts
    - default-page
    - default
    self_contained: false
---
```

Make a copy of the default stylesheets

```
files <- c("default-fonts", "default-page", "default")
from <- pagedown:::pkg_resource(paste0("css/", files, ".css"))
to <- c("custom-fonts.css", "custom-page.css", "custom.css")
file.copy(from = from, to = to)
```

Modify the CSS files

- Choose **fonts**, modify `custom-fonts.css`
- Choose the **paper size and margins**, modify `custom-page.css`

```
@page {
  size: 210mm 297mm;
  margin: 20mm 15mm 10mm 15mm;
}
```

Adjust the HTML viewer parameters

No impact on the PDF, only on the viewer

In `custom.css` file:

```css
:root {
  --background: whitesmoke;
  --pagedjs-width: 6in; /* modify here*/
  --pagedjs-height: 9in; /* modify here*/
  --color-paper: white;
  --color-mbox: rgba(0, 0, 0, 0.2);
  --running-title-width: 2.5in;
  --screen-pages-spacing: 5mm;
}
```

Margins customisations

Extract of the CSS file used for this deck

see pagedmedia.org/paged-js

```
div.footerright {
  position: running(footerright);
}

div.footerright::after {
  content: counter(page);
}

@page {
  size: 297mm 167mm;
  margin: 6.5mm 6.5mm 18mm 6.5mm;
  @bottom-right {
    content: element(footerright);
    width: var(--footer-right-width);
  }
  /* other margins rules */
}
```

Front page customisation

Time consuming

Do not hesitate to modify the Pandoc template!

```
file.copy(
  pagedown:::pkg_resource("html", "paged.html"),
  "custom_template.html"
)
```

Update the YAML header:

```
---
output:
  pagedown::html_paged:
    template: custom_template.html
    css:
    - custom-fonts.css
    - custom-page.css
    - custom.css
---
```

Going further…

see the pagedown issues and source code

Credits

- The amazing Paged.js core team
  Adam Hyde, Julie Blanc, Fred Chasen & Julien Taquet
- Zulko for ReLaXed
- The Shuttleworth Foundation 

Questions?