

# Package ‘pdftools’

April 19, 2022

**Type** Package

**Title** Text Extraction, Rendering and Converting of PDF Documents

**Version** 3.2.0

**Description** Utilities based on 'libpoppler' for extracting text, fonts, attachments and metadata from a PDF file. Also supports high quality rendering of PDF documents into PNG, JPEG, TIFF format, or into raw bitmap vectors for further processing in R.

**License** MIT + file LICENSE

**URL** <https://docs.ropensci.org/pdftools/> (website)

<https://github.com/ropensci/pdftools#readme> (devel)

<https://poppler.freedesktop.org> (upstream)

**BugReports** <https://github.com/ropensci/pdftools/issues>

**SystemRequirements** Poppler C++ API: libpoppler-cpp-dev (deb) or poppler-cpp-devel (rpm), and poppler-data (rpm/deb) package.

**Encoding** UTF-8

**Imports** Rcpp (>= 0.12.12), qpdf

**LinkingTo** Rcpp

**Suggests** png, webp, tesseract, testthat

**RoxygenNote** 7.1.1

**NeedsCompilation** yes

**Author** Jeroen Ooms [aut, cre] (<<https://orcid.org/0000-0002-4035-0289>>)

**Maintainer** Jeroen Ooms <jeroen@berkeley.edu>

**Repository** CRAN

**Date/Publication** 2022-04-19 17:50:02 UTC

## R topics documented:

pdftools . . . . .	2
pdf_ocr_text . . . . .	3
rendering . . . . .	4

<b>Index</b>	<b>6</b>
--------------	----------

---

pdfutils

*PDF utilities*

---

## Description

Utilities based on libpoppler for extracting text, fonts, attachments and metadata from a pdf file.

## Usage

```
pdf_info(pdf, opw = "", upw = "")
pdf_text(pdf, opw = "", upw = "")
pdf_data(pdf, font_info = FALSE, opw = "", upw = "")
pdf_fonts(pdf, opw = "", upw = "")
pdf_attachments(pdf, opw = "", upw = "")
pdf_toc(pdf, opw = "", upw = "")
pdf_pagesize(pdf, opw = "", upw = "")
```

## Arguments

pdf	file path or raw vector with pdf data
opw	string with owner password to open pdf
upw	string with user password to open pdf
font_info	if TRUE, extract font-data for each box. Be careful, this requires a very recent version of poppler and will error otherwise.

## Details

The [pdf\\_text](#) function renders all textboxes on a text canvas and returns a character vector of equal length to the number of pages in the PDF file. On the other hand, [pdf\\_data](#) is more low level and returns one data frame per page, containing one row for each textbox in the PDF.

Note that [pdf\\_data](#) requires a recent version of libpoppler which might not be available on all Linux systems. When using [pdf\\_data](#) in R packages, condition use `poppler_config()$has_pdf_data` which shows if this function can be used on the current system. For Ubuntu 16.04 (Xenial) and 18.04 (Bionic) you can use [the PPA](#) with backports of Poppler 0.74.0.

Poppler is pretty verbose when encountering minor errors in PDF files, in especially [pdf\\_text](#). These messages are usually safe to ignore, use [suppressMessages](#) to hide them altogether.

## See Also

Other pdfutils: [pdf\\_ocr\\_text\(\)](#), [qpdf](#), [rendering](#)

## Examples

```
# Just a random pdf file
pdf_file <- file.path(R.home("doc"), "NEWS.pdf")
info <- pdf_info(pdf_file)
text <- pdf_text(pdf_file)
fonts <- pdf_fonts(pdf_file)
files <- pdf_attachments(pdf_file)
```

---

pdf\_ocr\_text

*OCR text extraction*

---

## Description

Perform OCR text extraction. This requires you have the tesseract package.

## Usage

```
pdf_ocr_text(  
  pdf,  
  pages = NULL,  
  opw = "",  
  upw = "",  
  language = "eng",  
  dpi = 600  
)
```

```
pdf_ocr_data(  
  pdf,  
  pages = NULL,  
  opw = "",  
  upw = "",  
  language = "eng",  
  dpi = 600  
)
```

## Arguments

pdf	file path or raw vector with pdf data
pages	which pages of the pdf file to extract
opw	string with owner password to open pdf
upw	string with user password to open pdf
language	passed to <a href="#">tesseract</a> to specify the language of the engine.
dpi	resolution to render image that is passed to <a href="#">tesseract::ocr</a> .

## See Also

Other pdftools: [pdftools](#), [qpdf](#), [rendering](#)

---

`rendering`*Render / Convert PDF*

---

**Description**

High quality conversion of pdf page(s) to png, jpeg or tiff format, or render into a raw bitmap array for further processing in R.

**Usage**

```
pdf_render_page(  
  pdf,  
  page = 1,  
  dpi = 72,  
  numeric = FALSE,  
  antialias = TRUE,  
  opw = "",  
  upw = ""  
)
```

```
pdf_convert(  
  pdf,  
  format = "png",  
  pages = NULL,  
  filenames = NULL,  
  dpi = 72,  
  antialias = TRUE,  
  opw = "",  
  upw = "",  
  verbose = TRUE  
)
```

```
poppler_config()
```

**Arguments**

<code>pdf</code>	file path or raw vector with pdf data
<code>page</code>	which page to render
<code>dpi</code>	resolution (dots per inch) to render
<code>numeric</code>	convert raw output to (0-1) real values
<code>antialias</code>	enable antialiasing. Must be "text" or "draw" or TRUE (both) or FALSE (neither).
<code>opw</code>	owner password
<code>upw</code>	user password

format	string with output format such as "png" or "jpeg". Must be equal to one of poppler_config()\$supported_image_formats.
pages	vector with one-based page numbers to render. NULL means all pages.
filenames	vector of equal length to pages with output filenames. May also be a format string which is expanded using pages and format respectively.
verbose	print some progress info to stdout

### See Also

Other pdftools: [pdf\\_ocr\\_text\(\)](#), [pdftools](#), [qpdf](#)

### Examples

```
# Rendering should be supported on all platforms now
# convert few pages to png
file.copy(file.path(Sys.getenv("R_DOC_DIR"), "NEWS.pdf"), "news.pdf")
pdf_convert("news.pdf", pages = 1:3)

# render into raw bitmap
bitmap <- pdf_render_page("news.pdf")

# save to bitmap formats
png::writePNG(bitmap, "page.png")
webp::write_webp(bitmap, "page.webp")

# Higher quality
bitmap <- pdf_render_page("news.pdf", page = 1, dpi = 300)
png::writePNG(bitmap, "page.png")

# slightly more efficient
bitmap_raw <- pdf_render_page("news.pdf", numeric = FALSE)
webp::write_webp(bitmap_raw, "page.webp")

# Cleanup
unlink(c('news.pdf', 'news_1.png', 'news_2.png', 'news_3.png',
        'page.jpeg', 'page.png', 'page.webp'))
```

# Index

## \* **pdftools**

- pdf\_ocr\_text, 3
- pdftools, 2
- rendering, 4

- pdf\_attachments (pdftools), 2
- pdf\_convert (rendering), 4
- pdf\_data, 2
- pdf\_data (pdftools), 2
- pdf\_fonts (pdftools), 2
- pdf\_info (pdftools), 2
- pdf\_ocr\_data (pdf\_ocr\_text), 3
- pdf\_ocr\_text, 2, 3, 5
- pdf\_pagesize (pdftools), 2
- pdf\_render\_page (rendering), 4
- pdf\_text, 2
- pdf\_text (pdftools), 2
- pdf\_toc (pdftools), 2
- pdftools, 2, 3, 5
- poppler\_config (rendering), 4

- qpdf, 2, 3, 5

- render (rendering), 4
- rendering, 2, 3, 4

- suppressMessages, 2

- tesseract, 3
- tesseract::ocr, 3