Quickstart Guide: zztab2fig v0.2.0

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This quickstart guide covers the key features in zztab2fig v0.2.0. For complete documentation, see the "Object Types and Themes" and "Advanced Features" vignettes.

Installation

```
# Install from GitHub
# devtools::install_github("rgt47/zztab2fig")
```

```
library(zztab2fig)
```

Basic Usage

Convert a data frame to a cropped PDF table:

```
t2f(mtcars[1:6, 1:4], filename = "basic_table", sub_dir = output_dir)
```

	mpg	cyl	disp	hp
Mazda RX4	21.0	6	160	110
Mazda RX4 Wag	21.0	6	160	110
Datsun 710	22.8	4	108	93
Hornet 4 Drive	21.4	6	258	110
Hornet Sportabout	18.7	8	360	175
Valiant	18.1	6	225	105

This generates three files:

- `basic_table.tex` - LaTeX source
- `basic_table.pdf` - Full PDF
- `basic_table_cropped.pdf` - Cropped PDF for document inclusion

Journal Themes

Built-in themes provide journal-specific styling:

```
t2f(mtcars[1:6, 1:4], theme = "nejm",
    filename = "nejm_table", sub_dir = output_dir)
```

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Available themes: `"nejm"`, `"apa"`, `"nature"`, `"minimal"`

Set a global theme:

```
t2f_theme_set("nejm")
t2f(mtcars[1:6, 1:4])
t2f(iris[1:6, ])
```

Statistical Objects

t2f works directly with statistical objects:

```
model <- lm(mpg ~ cyl + hp + wt, data = mtcars)
t2f(model, filename = "regression", sub_dir = output_dir,
    include = c("estimate", "std.error", "p.value"))
```

Term	Estimate	Std_Error	p_value
(Intercept)	38.752	1.787	<0.001
cyl	-0.942	0.551	0.098
hp	-0.018	0.012	0.140
wt	-3.167	0.741	<0.001

Supported object types include `lm`, `glm`, `anova`, `aov`, `htest`, `matrix`, `table`, plus 13 additional types via broom integration (coxph, survreg, nls, polr, prcomp, kmeans, lmerMod, and more).

Inline Tables for R Markdown

Insert tables directly in R Markdown without LaTeX float positioning:

```
model <- lm(mpg ~ cyl + hp, data = mtcars)
t2f_inline(model,
           width = "3in",
           align = "left",
           caption = "Model Results",
           label = "tab:model",
           caption_position = "above")
```

Or use the convenience function for coefficient tables:

```
t2f_coef(model, caption = "Coefficients")
```

Add visual styling with frames and backgrounds:

```
t2f_inline(model,
           width = "3in",
           frame = TRUE,
           frame_color = "gray",
           background = "gray!5",
           inner_sep = "4pt")
```

Note: Add `\usepackage{caption}` to your R Markdown YAML for captions.

Model Comparison

Compare multiple models side-by-side:

```
m1 <- lm(mpg ~ cyl, data = mtcars)
m2 <- lm(mpg ~ cyl + hp, data = mtcars)
m3 <- lm(mpg ~ cyl + hp + wt, data = mtcars)

t2f_regression(
  Model1 = m1, Model2 = m2, Model3 = m3,
  stars = TRUE,
  filename = "model_comparison",
  sub_dir = output_dir
)
```

Term	Model1	Model2	Model3
(Intercept)	37.885* (2.074)	36.908* (2.191)	38.752* (1.787)
cyl	-2.876* (0.322)	-2.265* (0.576)	-0.942 (0.551)
hp		-0.019 (0.015)	-0.018 (0.012)
wt			-3.167* (0.741)
N	32	32	32
R-squared	0.726	0.741	0.843
Adj. R-squared	0.717	0.723	0.826

Captions and Labels

Add LaTeX captions and cross-reference labels:

```
t2f(mtcars[1:6, 1:4],
    caption = "Motor Trend Car Road Tests (1974)",
    label = "tab:mtcars",
    filename = "captioned_table")
```

Column Alignment

Explicit or auto-detected alignment:

```
t2f(iris[1:6, ], align = NULL)
t2f(mtcars[1:6, 1:4], align = c("l", "r", "r", "r"))
t2f(mtcars[1:6, 1:4], align = "c")
```

Decimal Alignment

Use siunitx for decimal-aligned columns:

```
df <- data.frame(
  Item = c("A", "B", "C"),
  Value1 = c(1.5, 123.45, 12.345),
  Value2 = c(0.001, 10.1, 1000.01)
)

t2f(df, filename = "decimal_aligned", sub_dir = output_dir,
    align = list("l", t2f_siunitx(table_format = "3.3"),
                  t2f_siunitx(table_format = "4.2")))
```

Item	Value1	Value2
A	1.500	0.001
B	123.450	10.100
C	12.345	1000.010

Multi-Page Tables

For large tables that span multiple pages:

```
t2f(mtcars,
    longtable = TRUE,
    caption = "Complete mtcars Dataset",
    filename = "long_table")
```

Quick Reference

Key t2f() Parameters

Parameter	Description	Default
`caption`	LaTeX table caption	NULL
`label`	LaTeX label for cross-refs	NULL
`align`	Column alignment (l/c/r)	NULL (auto)
`longtable`	Multi-page table support	FALSE
`crop`	Crop PDF margins	TRUE
`crop_margin`	Margin size (pts)	10
`theme`	Theme name or object	NULL

Key t2f_inline() Parameters

Parameter	Description	Default
`width`	Figure width (LaTeX units)	NULL
`align`	left, center, right	"center"
`caption`	Uses \captionof (no float)	NULL
`label`	LaTeX cross-reference label	NULL

Parameter	Description	Default
caption_position	"above" or "below"	"above"
frame	Draw border around table	FALSE
frame_color	Border color (xcolor syntax)	"black"
background	Background color (xcolor syntax)	NULL
inner_sep	Padding inside frame	"2pt"
format	"auto", "pdf", "png"	"auto"

Core Functions

Function	Purpose
t2f()	Convert object to PDF table
t2f_inline()	Inline tables for R Markdown
t2f_coef()	Quick coefficient tables
t2f_regression()	Compare regression models
t2f_theme_set()	Set global theme
t2f_theme_get()	Get current theme
check_latex_deps()	Check LaTeX dependencies
ensure_pdfcrop()	Install pdfcrop via TinyTeX

S3 Methods (Base)

Object Type	Method
data.frame	t2f.data.frame()
matrix	t2f.matrix()
lm	t2f.lm()
glm	t2f.glm()
anova / aov	t2f.anova() / t2f.aov()
htest	t2f.htest()

S3 Methods (via broom)

Object Type	Package
coxph, survreg, survfit	survival
nls	stats
polr, multinom	MASS, nnet
prcomp, kmeans	stats
lmerMod, glmerMod	lme4
lme	nlme
Arima	stats

Theme Presets

Function	Style
t2f_theme_nejm()	NEJM (medical journals)
t2f_theme_apa()	APA (psychology)
t2f_theme_nature()	Nature (scientific)

Function	Style
`t2f_theme_minimal()`	Clean, minimal

System Requirements

- R >= 4.0
- LaTeX distribution (TeX Live, MiKTeX, TinyTeX, or MacTeX)
- `pdflatex` and `pdfcrop` executables
- Optional: ImageMagick (for PNG output)

Check your setup:

```
check_latex_deps()
```

If pdfcrop is missing with TinyTeX:

```
ensure_pdfcrop(auto_install = TRUE)
```