Some Cars from the gtcars Dataset
Five Cars are shown here

Everything but the cost				
Make and Model		Performance		
mfr	model	hp	trq	msrp
Ford	GT	647	550	$447,000.00
Ferrari	458 Speciale	597	398	$291,744.00
Ferrari	458 Spider	562	398	$263,553.00
Ferrari	458 Italia	562	398	$233,509.00
Ferrari	488 GTB	661	561	$245,400.00

Cars are all 2015 models.

Horsepower and Torque values are estimates.

```
import polars as pl
from great_tables import GT, md, html
from great_tables.data import islands

islands_mini = pl.from_pandas(islands).sort("size", descending=True).head(10)

print(
    GT(islands_mini)
    .tab_header(title="Large Landmasses of the World", subtitle="The top ten largest are pres
    # .tab_stub(rowname_col="name")
    .tab_source_note(source_note="Source: The World Almanac and Book of Facts, 1975, page 40
    .tab_source_note(
        # source_note=md("Reference: McNeil, D. R. (1977) *Interactive Data Analysis*. Wiley
        source_note=html("Reference: McNeil, D. R. (1977) *Interactive Data Analysis*. Wiley
    )
    .tab_stubhead(label="landmass")
    .fmt_image(columns="size")
    .as_latex()
)
```

```
\begin{table}
\caption*{
{\large Large Landmasses of the World} \\
{\small The top ten largest are presented}
}
```

Large Landmasses of the World

The top ten largest are presented

name	size
Africa	11,506
Antarctica	5,500
Asia	16,988
Australia	2,968
Axel Heiberg	16
Baffin	184
Banks	23
Borneo	280
Britain	84
Celebes	73

Source: The World Almanac and Book of Facts, 1975, page 406.
Reference: McNeil, D. R. (1977) *Interactive Data Analysis*. Wiley.

New York Air Quality Measurements

Daily measurements in New York City (May 1-10, 1973)

Ozone	Solar_R	Wind	Temp	Month	Day	Year
41.0	190.0	7.4	67	5	1	1973
36.0	118.0	8.0	72	5	2	1973
12.0	149.0	12.6	74	5	3	1973
18.0	313.0	11.5	62	5	4	1973
nan	nan	14.3	56	5	5	1973
28.0	nan	14.9	66	5	6	1973
23.0	299.0	8.6	65	5	7	1973
19.0	99.0	13.8	59	5	8	1973
8.0	19.0	20.1	61	5	9	1973
nan	194.0	8.6	69	5	10	1973

Physical Constants Having a Molar Basis

name	value
Molar Planck Constant	3.990×10^{-10}
Electron Molar Mass	5.486×10^{-7}
Molar Volume of Silicon	1.206×10^{-5}
Muon Molar Mass	1.134×10^{-4}
Molar Mass Constant	1.000×10^{-3}
Proton Molar Mass	1.007×10^{-3}
Neutron Molar Mass	1.009×10^{-3}
Tau Molar Mass	1.908×10^{-3}
Deuteron Molar Mass	2.014×10^{-3}
Helion Molar Mass	3.015×10^{-3}
Triton Molar Mass	3.016×10^{-3}
Alpha Particle Molar Mass	4.002×10^{-3}
Molar Mass of Carbon-12	1.200×10^{-2}
Molar Volume of Ideal Gas (273.15 K, 101.325 kpa)	2.241×10^{-2}
Molar Volume of Ideal Gas (273.15 K, 100 kpa)	2.271×10^{-2}
Molar Gas Constant	8.314

num	date	time	currency
111 B	Thursday, January 15, 2015	[13:35]	49.95
2.2 KiB	Sunday, February 15, 2015	[14:40]	17.95
32.5 KiB	Sunday, March 15, 2015	[15:45]	_$1.39_
434 KiB	Wednesday, April 15, 2015	[16:50]	_$65,100.00_
5.3 MiB	Friday, May 15, 2015	[17:55]	_$1,325.81_

```
\fontsize{12.0pt}{14.4pt}\selectfont

\begin{tabular*}{\linewidth}{@{\extracolsep{\fill}}lr}
\toprule
name & size \\
\midrule\addlinespace[2.5pt]
Asia & 16988 \\
Africa & 11506 \\
North America & 9390 \\
South America & 6795 \\
Antarctica & 5500 \\
Europe & 3745 \\
Australia & 2968 \\
Greenland & 840 \\
New Guinea & 306 \\
Borneo & 280 \\
\bottomrule
\end{tabular*}
\begin{minipage}{\linewidth}
Source: The World Almanac and Book of Facts, 1975, page 406.\\
Reference: McNeil, D. R. (1977) *Interactive Data Analysis*. Wiley.\$\\
\end{minipage}
\end{table}
```

```
/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_formats.py
  warn("fmt_image() is not currently implemented in LaTeX output.")
/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_renc
  warnings.warn(msg)
```

```python
from great_tables import GT, html
from great_tables.data import airquality

airquality_mini = airquality.head(10).assign(Year=1973)

print(
    GT(airquality_mini)
    .tab_header(
        title="New York Air Quality Measurements",
        subtitle="Daily measurements in New York City (May 1-10, 1973)",
    )
    .tab_spanner(label="Time", columns=["Year", "Month", "Day"])
```

```
    .tab_spanner(label="Measurement", columns=["Ozone", "Solar_R", "Wind", "Temp"])
    .cols_move_to_start(columns=["Year", "Month", "Day"])
    .cols_label(
        Ozone=html("Ozone,<br>ppbV"),
        Solar_R=html("Solar R.,<br>cal/m<sup>2</sup>"),
        Wind=html("Wind,<br>mph"),
        Temp=html("Temp,<br>&deg;F"),
    )
    .as_latex()
)
```

```
\begin{table}
\caption*{
{\large New York Air Quality Measurements} \\
{\small Daily measurements in New York City (May 1-10, 1973)}
}

\fontsize{12.0pt}{14.4pt}\selectfont

\begin{tabular*}{\linewidth}{@{\extracolsep{\fill}}rrrrrrr}
\toprule
\multicolumn{3}{c}{Time} & \multicolumn{4}{c}{Measurement} \\
\cmidrule(lr){1-3} \cmidrule(lr){4-7}
Year & Month & Day & Ozone,<br>ppbV & Solar R.,<br>cal/m<sup>2</sup> & Wind,<br>mph & Temp,<
\midrule\addlinespace[2.5pt]
1973 & 5 & 1 & 41.0 & 190.0 & 7.4 & 67 \\
1973 & 5 & 2 & 36.0 & 118.0 & 8.0 & 72 \\
1973 & 5 & 3 & 12.0 & 149.0 & 12.6 & 74 \\
1973 & 5 & 4 & 18.0 & 313.0 & 11.5 & 62 \\
1973 & 5 & 5 & nan & nan & 14.3 & 56 \\
1973 & 5 & 6 & 28.0 & nan & 14.9 & 66 \\
1973 & 5 & 7 & 23.0 & 299.0 & 8.6 & 65 \\
1973 & 5 & 8 & 19.0 & 99.0 & 13.8 & 59 \\
1973 & 5 & 9 & 8.0 & 19.0 & 20.1 & 61 \\
1973 & 5 & 10 & nan & 194.0 & 8.6 & 69 \\
\bottomrule
\end{tabular*}

\end{table}

/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_rend
  warnings.warn(msg)
```

```python
from great_tables import GT
from great_tables.data import countrypops
import polars as pl
import polars.selectors as cs

# Get vectors of 2-letter country codes for each region of Oceania
oceania = {
    "Australasia": ["AU", "NZ"],
    "Melanesia": ["NC", "PG", "SB", "VU"],
    "Micronesia": ["FM", "GU", "KI", "MH", "MP", "NR", "PW"],
    "Polynesia": ["PF", "WS", "TO", "TV"],
}

# Create a dictionary mapping country to region (e.g. AU -> Australasia)
country_to_region = {
    country: region for region, countries in oceania.items() for country in countries
}

wide_pops = (
    pl.from_pandas(countrypops)
    .filter(
        pl.col("country_code_2").is_in(list(country_to_region))
        & pl.col("year").is_in([2000, 2010, 2020])
    )
    .with_columns(pl.col("country_code_2").replace(country_to_region).alias("region"))
    .pivot(index=["country_name", "region"], on="year", values="population")
    .sort("2020", descending=True)
)

print(
    GT(wide_pops)
    .tab_header(title="Populations of Oceania's Countries in 2000, 2010, and 2020")
    .tab_spanner(label="Total Population", columns=cs.all())
    #.tab_stub(rowname_col="country_name", groupname_col="region")
    .fmt_integer() # example fails because of this method
    .as_latex()
)
```

towny example

```python
from great_tables import GT, html
from great_tables.data import sza
```

```python
import polars as pl
import polars.selectors as cs

sza_pivot = (
    pl.from_pandas(sza)
    .filter((pl.col("latitude") == "20") & (pl.col("tst") <= "1200"))
    .select(pl.col("*").exclude("latitude"))
    .drop_nulls()
    .pivot(values="sza", index="month", on="tst", sort_columns=True)
)

print(
    GT(
        sza_pivot,
        #rowname_col="month"
    )
    .data_color(
        domain=[90, 0],
        palette=["rebeccapurple", "white", "orange"],
        na_color="white",
    )
    .tab_header(
        title="Solar Zenith Angles from 05:30 to 12:00",
        subtitle=html("Average monthly values at latitude of 20&deg;N."),
    )
    .sub_missing(missing_text="")
    .as_latex()
)
```

```
\begin{table}
\caption*{
{\large Solar Zenith Angles from 05:30 to 12:00} \\
{\small Average monthly values at latitude of 20\&deg;N.}
}

\fontsize{12.0pt}{14.4pt}\selectfont

\begin{tabular*}{\linewidth}{@{\extracolsep{\fill}}lrrrrrrrrrrrrrr}
\toprule
month & 0530 & 0600 & 0630 & 0700 & 0730 & 0800 & 0830 & 0900 & 0930 & 1000 & 1030 & 1100 & 1
\midrule\addlinespace[2.5pt]
jan & None & None & None & 84.9 & 78.7 & 72.7 & 66.1 & 61.5 & 56.5 & 52.1 & 48.3 & 45.5 & 43
```

```
feb & None & None & 88.9 & 82.5 & 75.8 & 69.6 & 63.3 & 57.7 & 52.2 & 47.4 & 43.1 & 40.0 & 37
mar & None & None & 85.7 & 78.8 & 72.0 & 65.2 & 58.6 & 52.3 & 46.2 & 40.5 & 35.5 & 31.4 & 28
apr & None & 88.5 & 81.5 & 74.4 & 67.4 & 60.3 & 53.4 & 46.5 & 39.7 & 33.2 & 26.9 & 21.3 & 17
may & None & 85.0 & 78.2 & 71.2 & 64.3 & 57.2 & 50.2 & 43.2 & 36.1 & 29.1 & 26.1 & 15.2 & 8.8
jun & 89.2 & 82.7 & 76.0 & 69.3 & 62.5 & 55.7 & 48.8 & 41.9 & 35.0 & 28.1 & 21.1 & 14.2 & 7.3
jul & 88.8 & 82.3 & 75.7 & 69.1 & 62.3 & 55.5 & 48.7 & 41.8 & 35.0 & 28.1 & 21.2 & 14.3 & 7.7
aug & None & 83.8 & 77.1 & 70.2 & 63.3 & 56.4 & 49.4 & 42.4 & 35.4 & 28.3 & 21.3 & 14.3 & 7.3
sep & None & 87.2 & 80.2 & 73.2 & 66.1 & 59.1 & 52.1 & 45.1 & 38.1 & 31.3 & 24.7 & 18.6 & 13
oct & None & None & 84.1 & 77.1 & 70.2 & 63.3 & 56.5 & 49.9 & 43.5 & 37.5 & 32.0 & 27.4 & 24
nov & None & None & 87.8 & 81.3 & 74.5 & 68.3 & 61.8 & 56.0 & 50.2 & 45.3 & 40.7 & 37.4 & 35
dec & None & None & None & 84.3 & 78.0 & 71.8 & 66.1 & 60.5 & 55.6 & 50.9 & 47.2 & 44.2 & 42
\bottomrule
\end{tabular*}

\end{table}


/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_renc
  warnings.warn(msg)
/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_renc
  warnings.warn(msg)


\begin{table}
\caption*{
{\large 2023 Mean **Carbon Intensity** (gCO2eq/kWh) and **Power Consumption** Breakdown (\%)]
}

\fontsize{12.0pt}{14.4pt}\selectfont

\begin{tabular*}{\linewidth}{@{\extracolsep{\fill}}lcccccccccccc}
\toprule
Zone & CO2 Intensity & Hydro & Nuclear & Wind & Solar & Geothermal & Biomass & Gas & Coal & (
\midrule\addlinespace[2.5pt]
Sweden & 26 & 39.1\% & 26.8\% & 27.7\% & 0.1\% & 0.0\% & 0.4\% & 0.4\% & 0.8\% & 0.0\% & 4.6\
Iceland & 28 & 69.4\% & 0.0\% & 0.0\% & 0.0\% & 30.6\% & 0.0\% & 0.0\% & 0.0\% & 0.0\% & 0.0\
Quebec & 35 & 90.1\% & 2.1\% & 4.4\% & 0.0\% & 0.0\% & 1.9\% & 1.4\% & 0.0\% & 0.0\% & 0.0\%
France & 46 & 12.3\% & 65.4\% & 10.3\% & 1.8\% & 0.0\% & 1.0\% & 7.1\% & 0.3\% & 0.3\% & 0.1\
Ontario & 104 & 23.3\% & 49.4\% & 8.7\% & 0.1\% & 0.0\% & 0.2\% & 18.1\% & 0.0\% & 0.0\% & 0
New Zealand & 106 & 60.5\% & 0.0\% & 7.7\% & 0.1\% & 19.0\% & 0.0\% & 6.8\% & 3.7\% & 0.0\% &
Finland & 107 & 20.2\% & 36.5\% & 24.1\% & 0.1\% & 0.0\% & 6.2\% & 3.0\% & 8.1\% & 0.0\% & 1
South Australia & 132 & 0.7\% & 0.0\% & 42.6\% & 33.7\% & 0.0\% & 0.0\% & 13.3\% & 9.0\% & 0
Spain & 132 & 17.1\% & 24.2\% & 25.1\% & 8.0\% & 0.0\% & 2.0\% & 18.8\% & 1.3\% & 0.2\% & 0.3
Belgium & 147 & 1.3\% & 39.6\% & 25.2\% & 3.6\% & 0.0\% & 2.8\% & 19.4\% & 1.7\% & 0.1\% & 4
```

```
Tasmania & 162 & 49.0\% & 0.0\% & 22.6\% & 10.8\% & 0.0\% & 0.0\% & 1.5\% & 16.1\% & 0.0\% &
East Denmark & 184 & 6.4\% & 5.5\% & 48.4\% & 1.3\% & 0.0\% & 16.8\% & 7.7\% & 10.8\% & 1.4\
West Denmark & 188 & 8.8\% & 2.2\% & 56.3\% & 1.6\% & 0.0\% & 7.6\% & 8.5\% & 13.0\% & 0.9\%
Great Britain & 214 & 3.8\% & 12.4\% & 35.9\% & 2.7\% & 0.0\% & 6.2\% & 35.1\% & 2.0\% & 0.0
Netherlands & 218 & 1.1\% & 3.9\% & 46.7\% & 10.8\% & 0.0\% & 4.6\% & 22.4\% & 8.6\% & 0.8\%
New York ISO & 275 & 23.7\% & 22.8\% & 4.9\% & 0.0\% & 0.0\% & 0.1\% & 46.9\% & 0.0\% & 0.0\
Italy (North) & 307 & 22.7\% & 14.5\% & 3.9\% & 2.9\% & 0.2\% & 3.1\% & 38.4\% & 1.5\% & 0.2
California & 328 & 8.4\% & 12.7\% & 7.9\% & 12.0\% & 3.0\% & 1.8\% & 48.5\% & 2.1\% & 0.0\% &
Germany & 389 & 4.4\% & 2.8\% & 39.7\% & 3.3\% & 0.0\% & 8.7\% & 14.4\% & 23.3\% & 0.6\% & 0
Ireland & 389 & 3.7\% & 0.8\% & 38.5\% & 0.2\% & 0.0\% & 2.5\% & 42.4\% & 9.7\% & 2.0\% & 0.
Western Australia & 417 & 0.0\% & 0.0\% & 14.1\% & 33.8\% & 0.0\% & 0.3\% & 24.2\% & 27.1\% &
Texas & 432 & 0.0\% & 9.1\% & 22.3\% & 6.0\% & 0.0\% & 0.0\% & 46.1\% & 16.1\% & 0.0\% & 0.4
Alberta & 447 & 1.9\% & 0.0\% & 12.4\% & 1.1\% & 0.0\% & 2.5\% & 70.7\% & 7.2\% & 0.0\% & 4.
Victoria & 508 & 3.9\% & 0.0\% & 17.5\% & 19.0\% & 0.0\% & 0.0\% & 0.3\% & 59.1\% & 0.0\% &
New South Wales & 578 & 3.2\% & 0.0\% & 9.5\% & 23.7\% & 0.0\% & 0.2\% & 0.7\% & 62.6\% & 0.
Queensland & 662 & 1.9\% & 0.0\% & 3.8\% & 21.1\% & 0.0\% & 0.0\% & 7.2\% & 65.7\% & 0.2\% &
South Africa & 685 & 2.2\% & 4.3\% & 5.8\% & 3.8\% & 0.0\% & 0.0\% & 0.0\% & 79.9\% & 2.0\% &
India (North) & 693 & 9.3\% & 2.2\% & 0.1\% & 10.6\% & 0.0\% & 0.0\% & 1.8\% & 75.2\% & 0.0\
\bottomrule
\end{tabular*}

\end{table}
```

```
/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_ren
  warnings.warn(msg)
```

```python
import polars as pl
import polars.selectors as cs
from great_tables import GT, loc, style

coffee_sales = pl.read_ndjson("../examples/_data/coffee-sales.ndjson")

sel_rev = cs.starts_with("revenue")
sel_prof = cs.starts_with("profit")

# yo

print(
    GT(coffee_sales)
    .tab_header("Sales of Coffee Equipment")
    .tab_spanner(label="Revenue", columns=sel_rev)
    .tab_spanner(label="Profit", columns=sel_prof)
```

```python
    .cols_label(
        revenue_dollars="Amount",
        profit_dollars="Amount",
        revenue_pct="Percent",
        profit_pct="Percent",
        monthly_sales="Monthly Sales",
        icon="",
        product="Product",
    )
    # formatting ----
    .fmt_number(
        columns=cs.ends_with("dollars"),
        compact=True,
        pattern="${x}",
        n_sigfig=3,
    )
    .fmt_percent(columns=cs.ends_with("pct"), decimals=0)
    # style ----
    .tab_style(
        style=style.fill(color="aliceblue"),
        locations=loc.body(columns=sel_rev),
    )
    .tab_style(
        style=style.fill(color="papayawhip"),
        locations=loc.body(columns=sel_prof),
    )
    .tab_style(
        style=style.text(weight="bold"),
        locations=loc.body(rows=pl.col("product") == "Total"),
    )
    # .fmt_nanoplot("monthly_sales", plot_type="bar")
    # .fmt_image("icon", path="docs/examples/_data/coffee-table-icons/")
    .sub_missing(missing_text="")
    .as_latex()
)
```

```
\begin{table}
\caption*{
{\large Sales of Coffee Equipment}
}

\fontsize{12.0pt}{14.4pt}\selectfont
```

```
\begin{tabular*}{\linewidth}{@{\extracolsep{\fill}}llrrrrc}
\toprule
 & \multicolumn{2}{c}{Revenue} & \multicolumn{2}{c}{Profit} &  \\
\cmidrule(lr){2-3} \cmidrule(lr){4-5}
 & Product & Amount & Percent & Amount & Percent & Monthly Sales \\
\midrule\addlinespace[2.5pt]
grinder.png & Grinder & \$904K & 3\% & \$568K & 4\% & shape: (12,)
Series: '' [i64]
[
    521
    494
    596
    613
    667
    …
    686
    607
    594
    568
    751
] \\
moka-pot.png & Moka pot & \$2.05M & 7\% & \$181K & 1\% & shape: (12,)
Series: '' [i64]
[
    4726
    4741
    4791
    5506
    6156
    …
    6026
    5304
    4884
    4648
    6283
] \\
cold-brew.png & Cold brew & \$289K & 1\% & \$242K & 2\% & shape: (12,)
Series: '' [i64]
[
    244
    249
    438
```

```
    981
    1774
    …
    2348
    1741
    896
    499
    244
] \\
filter.png & Filter & \$404K & 1\% & \$70.0K & 0\% & shape: (12,)
Series: '' [i64]
[
    2067
    1809
    1836
    2123
    2252
    …
    2367
    2164
    2195
    2070
    2744
] \\
drip-machine.png & Drip machine & \$2.63M & 9\% & \$1.37M & 9\% & shape: (12,)
Series: '' [i64]
[
    2137
    1623
    1971
    2097
    2580
    …
    2316
    2052
    1967
    1837
    2328
] \\
aeropress.png & AeroPress & \$2.60M & 9\% & \$1.29M & 9\% & shape: (12,)
Series: '' [i64]
[
    6332
```

```
    5199
    6367
    7024
    7906
    …
    7797
    6828
    6963
    6877
    9270
] \\
pour-over.png & Pour over & \$846K & 3\% & \$365K & 2\% & shape: (12,)
Series: '' [i64]
[
    1562
    1291
    1511
    1687
    1940
    …
    1856
    1715
    1806
    1601
    2165
] \\
french-press.png & French press & \$1.11M & 4\% & \$748K & 5\% & shape: (12,)
Series: '' [i64]
[
    3507
    2880
    3346
    3792
    3905
    …
    4428
    3279
    3420
    3297
    4819
] \\
cezve.png & Cezve & \$2.51M & 9\% & \$1.97M & 13\% & shape: (12,)
Series: '' [i64]
```

```
[
    12171
    11469
    11788
    13630
    15391
    …
    14433
    12985
    12935
    11598
    15895
] \\
chemex.png & Chemex & \$3.14M & 11\% & \$818K & 6\% & shape: (12,)
Series: '' [i64]
[
    4938
    4167
    5235
    6000
    6358
    …
    6249
    5605
    6076
    4980
    7220
] \\
scale.png & Scale & \$3.80M & 13\% & \$2.91M & 20\% & shape: (12,)
Series: '' [i64]
[
    1542
    1566
    1681
    2028
    2425
    …
    2232
    2036
    2089
    1693
    3180
] \\
```

```
kettle.png & Kettle & \$756K & 3\% & \$618K & 4\% & shape: (12,)
Series: '' [i64]
[
    1139
    1023
    1087
    1131
    1414
    …
    1304
    1140
    1233
    1193
    1529
] \\
espresso-machine.png & Espresso Machine & \$8.41M & 29\% & \$3.64M & 25\% & shape: (12,)
Series: '' [i64]
[
    686
    840
    618
    598
    2148
    …
    996
    1002
    668
    858
    2577
] \\
None & Total & \$29.4M & 100\% & \$14.8M & 100\% & None \\
\bottomrule
\end{tabular*}

\end{table}

/opt/hostedtoolcache/Python/3.10.18/x64/lib/python3.10/site-packages/great_tables/_utils_renc
  warnings.warn(msg)
```