Great Tables 1 in Python: Structure, Format and Style

2025-04-05

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# 1. Code Along: Coffee Table

This workshop (and future video), with presenters Michael Chow and Rich Iannone, is all about using [Great Tables](https://posit-dev.github.io/great-tables/articles/intro.html) to make beautiful tables for publication and display purposes. We believe that effective tables have these things in common:

1. structuring that aids in the reading of the table
2. well-formatted values, fitting expectations for the field of study
3. styling that reduces time to insight and improves aesthetics

## 1.1 About The Instructors

**Michael Chow, Senior Software Engineer, Posit**

Michael is a data scientist and software engineer. He has programmed in Python for well over a decade, and he obtained a PhD in cognitive psychology from Princeton University. His interests include statistical methods, skill acquisition, and human memory.

**Richard Iannone, Senior Software Engineer, Posit**

Richard is a software engineer and table enthusiast. He’s been vigorously working on making display tables easier to create/display in Python. And generally Rich enjoys creating open source packages so that people can great things in their own work.

## 1.2 Start

Setting up.

import polars as pl  
import json  
import polars.selectors as cs  
import typing\_extensions  
from great\_tables import GT, loc, style

Importing the data.

# Load JSON file  
with open("coffee-sales.json", "r") as f:  
 raw\_data = json.load(f)  
  
# Extract column names  
columns = [col["name"] for col in raw\_data["columns"]]  
  
# Extract values and convert to rows  
values = list(zip(\*[col["values"] for col in raw\_data["columns"]]))  
  
# Convert to list of dictionaries while extracting only the list from 'monthly\_sales'  
data = []  
for row in values:  
 row\_dict = dict(zip(columns, row))  
   
 # Extract only the list from the "monthly\_sales" column  
 if "monthly\_sales" in row\_dict:  
 if isinstance(row\_dict["monthly\_sales"], dict) and "values" in row\_dict["monthly\_sales"]:  
 row\_dict["monthly\_sales"] = row\_dict["monthly\_sales"]["values"] # Extract only the list  
   
 data.append(row\_dict)  
  
# Create Polars DataFrame  
coffee\_sales = pl.DataFrame(data)  
  
coffee\_sales

| icon | product | revenue\_dollars | revenue\_pct | profit\_dollars | profit\_pct | monthly\_sales |
| --- | --- | --- | --- | --- | --- | --- |
| str | str | f64 | f64 | f64 | f64 | list[i64] |
| "grinder.png" | "Grinder" | 904500.0 | 0.03 | 567960.0 | 0.04 | [521, 494, … 751] |
| "moka-pot.png" | "Moka pot" | 2.04525e6 | 0.07 | 181080.0 | 0.01 | [4726, 4741, … 6283] |
| "cold-brew.png" | "Cold brew" | 288750.0 | 0.01 | 241770.0 | 0.02 | [244, 249, … 244] |
| "filter.png" | "Filter" | 404250.0 | 0.01 | 70010.0 | 0.0 | [2067, 1809, … 2744] |
| "drip-machine.png" | "Drip machine" | 2.632e6 | 0.09 | 1.37445e6 | 0.09 | [2137, 1623, … 2328] |
| … | … | … | … | … | … | … |
| "chemex.png" | "Chemex" | 3.13725e6 | 0.11 | 817680.0 | 0.06 | [4938, 4167, … 7220] |
| "scale.png" | "Scale" | 3.801e6 | 0.13 | 2.91029e6 | 0.2 | [1542, 1566, … 3180] |
| "kettle.png" | "Kettle" | 756250.0 | 0.03 | 617520.0 | 0.04 | [1139, 1023, … 1529] |
| "espresso-machine.png" | "Espresso Machine" | 8.406e6 | 0.29 | 3.63644e6 | 0.25 | [686, 840, … 2577] |
| null | "Total" | 2.94485e7 | 1.0 | 1.479315e7 | 1.0 | null |

Let’s get the data into Great Tables.

gt\_tbl\_1 = GT(coffee\_sales)  
  
gt\_tbl\_1

| icon | product | revenue\_dollars | revenue\_pct | profit\_dollars | profit\_pct | monthly\_sales |
| --- | --- | --- | --- | --- | --- | --- |
| grinder.png | Grinder | 904500.0 | 0.03 | 567960.0 | 0.04 | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | 2045250.0 | 0.07 | 181080.0 | 0.01 | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | 288750.0 | 0.01 | 241770.0 | 0.02 | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | 404250.0 | 0.01 | 70010.0 | 0.0 | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | 2632000.0 | 0.09 | 1374450.0 | 0.09 | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | 2601500.0 | 0.09 | 1293780.0 | 0.09 | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | 846000.0 | 0.03 | 364530.0 | 0.02 | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | 1113250.0 | 0.04 | 748120.0 | 0.05 | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | 2512500.0 | 0.09 | 1969520.0 | 0.13 | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | 3137250.0 | 0.11 | 817680.0 | 0.06 | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | 3801000.0 | 0.13 | 2910290.0 | 0.2 | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | 756250.0 | 0.03 | 617520.0 | 0.04 | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | 8406000.0 | 0.29 | 3636440.0 | 0.25 | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | 29448500.0 | 1.0 | 14793150.0 | 1.0 | None |

## 1.3 Structure Basics

Add a title to the table to explain contents.

gt\_tbl\_2 = gt\_tbl\_1.tab\_header(  
 title = "Coffee Equipment Sales for 2023"  
 )  
  
gt\_tbl\_2

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | revenue\_dollars | revenue\_pct | profit\_dollars | profit\_pct | monthly\_sales |
| grinder.png | Grinder | 904500.0 | 0.03 | 567960.0 | 0.04 | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | 2045250.0 | 0.07 | 181080.0 | 0.01 | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | 288750.0 | 0.01 | 241770.0 | 0.02 | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | 404250.0 | 0.01 | 70010.0 | 0.0 | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | 2632000.0 | 0.09 | 1374450.0 | 0.09 | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | 2601500.0 | 0.09 | 1293780.0 | 0.09 | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | 846000.0 | 0.03 | 364530.0 | 0.02 | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | 1113250.0 | 0.04 | 748120.0 | 0.05 | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | 2512500.0 | 0.09 | 1969520.0 | 0.13 | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | 3137250.0 | 0.11 | 817680.0 | 0.06 | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | 3801000.0 | 0.13 | 2910290.0 | 0.2 | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | 756250.0 | 0.03 | 617520.0 | 0.04 | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | 8406000.0 | 0.29 | 3636440.0 | 0.25 | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | 29448500.0 | 1.0 | 14793150.0 | 1.0 | None |

Group numerical columns with a spanner. One grouping should be for revenue columns, another should be for profit columns.

gt\_tbl\_3 = gt\_tbl\_2.tab\_spanner(  
 label="Revenue", columns=cs.starts\_with("revenue")  
).tab\_spanner(   
 label="Profit", columns=cs.starts\_with("profit")  
)  
  
  
gt\_tbl\_3

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | monthly\_sales |
| revenue\_dollars | revenue\_pct | profit\_dollars | profit\_pct |
| grinder.png | Grinder | 904500.0 | 0.03 | 567960.0 | 0.04 | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | 2045250.0 | 0.07 | 181080.0 | 0.01 | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | 288750.0 | 0.01 | 241770.0 | 0.02 | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | 404250.0 | 0.01 | 70010.0 | 0.0 | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | 2632000.0 | 0.09 | 1374450.0 | 0.09 | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | 2601500.0 | 0.09 | 1293780.0 | 0.09 | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | 846000.0 | 0.03 | 364530.0 | 0.02 | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | 1113250.0 | 0.04 | 748120.0 | 0.05 | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | 2512500.0 | 0.09 | 1969520.0 | 0.13 | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | 3137250.0 | 0.11 | 817680.0 | 0.06 | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | 3801000.0 | 0.13 | 2910290.0 | 0.2 | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | 756250.0 | 0.03 | 617520.0 | 0.04 | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | 8406000.0 | 0.29 | 3636440.0 | 0.25 | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | 29448500.0 | 1.0 | 14793150.0 | 1.0 | None |

Change Column labels for readability. The column names are: icon, product, revenue\_dollars, revenue\_pct, profit\_dollars, profit\_pct, and monthly\_sales.

gt\_tbl\_4 = (  
 gt\_tbl\_3  
 .cols\_label(  
 revenue\_dollars="Amount",  
 revenue\_pct = "Percent",  
 profit\_dollars="Amount",  
 profit\_pct = "Percent",  
 monthly\_sales = "Monthly Sales"  
 )  
)  
  
gt\_tbl\_4

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | 904500.0 | 0.03 | 567960.0 | 0.04 | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | 2045250.0 | 0.07 | 181080.0 | 0.01 | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | 288750.0 | 0.01 | 241770.0 | 0.02 | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | 404250.0 | 0.01 | 70010.0 | 0.0 | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | 2632000.0 | 0.09 | 1374450.0 | 0.09 | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | 2601500.0 | 0.09 | 1293780.0 | 0.09 | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | 846000.0 | 0.03 | 364530.0 | 0.02 | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | 1113250.0 | 0.04 | 748120.0 | 0.05 | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | 2512500.0 | 0.09 | 1969520.0 | 0.13 | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | 3137250.0 | 0.11 | 817680.0 | 0.06 | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | 3801000.0 | 0.13 | 2910290.0 | 0.2 | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | 756250.0 | 0.03 | 617520.0 | 0.04 | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | 8406000.0 | 0.29 | 3636440.0 | 0.25 | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | 29448500.0 | 1.0 | 14793150.0 | 1.0 | None |

## 1.4 Formatting Basics

Format the currency values to make them look better.

gt\_tbl\_5 = (  
 gt\_tbl\_4  
 .fmt\_currency(columns=cs.ends\_with("dollars"),  
 use\_subunits=False  
 )  
)  
  
gt\_tbl\_5

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 0.03 | $567,960 | 0.04 | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | $2,045,250 | 0.07 | $181,080 | 0.01 | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | $288,750 | 0.01 | $241,770 | 0.02 | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | $404,250 | 0.01 | $70,010 | 0.0 | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | $2,632,000 | 0.09 | $1,374,450 | 0.09 | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | $2,601,500 | 0.09 | $1,293,780 | 0.09 | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | $846,000 | 0.03 | $364,530 | 0.02 | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | $1,113,250 | 0.04 | $748,120 | 0.05 | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | $2,512,500 | 0.09 | $1,969,520 | 0.13 | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | $3,137,250 | 0.11 | $817,680 | 0.06 | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | $3,801,000 | 0.13 | $2,910,290 | 0.2 | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | $756,250 | 0.03 | $617,520 | 0.04 | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | $8,406,000 | 0.29 | $3,636,440 | 0.25 | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | $29,448,500 | 1.0 | $14,793,150 | 1.0 | None |

Format the fractional values by turning them into percentages.

gt\_tbl\_6 = (  
 gt\_tbl\_5  
 .fmt\_percent(  
 columns =cs.ends\_with("pct"),  
 decimals=0  
 )  
)  
  
gt\_tbl\_6

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 3% | $567,960 | 4% | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | $2,045,250 | 7% | $181,080 | 1% | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | $288,750 | 1% | $241,770 | 2% | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | $404,250 | 1% | $70,010 | 0% | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | $846,000 | 3% | $364,530 | 2% | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | $1,113,250 | 4% | $748,120 | 5% | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | $3,137,250 | 11% | $817,680 | 6% | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | $3,801,000 | 13% | $2,910,290 | 20% | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | $756,250 | 3% | $617,520 | 4% | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

## 1.5 Styling with tab\_style()

Add an ‘aliceblue’ background to columns pertaining to revenue.

gt\_tbl\_7 = (  
 gt\_tbl\_6  
 .tab\_style(  
 style= style.fill(color="aliceblue"),  
 locations=loc.body(columns=cs.starts\_with("revenue"))  
 )  
)  
  
gt\_tbl\_7

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 3% | $567,960 | 4% | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | $2,045,250 | 7% | $181,080 | 1% | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | $288,750 | 1% | $241,770 | 2% | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | $404,250 | 1% | $70,010 | 0% | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | $846,000 | 3% | $364,530 | 2% | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | $1,113,250 | 4% | $748,120 | 5% | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | $3,137,250 | 11% | $817,680 | 6% | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | $3,801,000 | 13% | $2,910,290 | 20% | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | $756,250 | 3% | $617,520 | 4% | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

Add an ‘papayawhip’ background to columns pertaining to profit.

gt\_tbl\_8 = (  
 gt\_tbl\_7  
 .tab\_style(  
 style= style.fill(color="papayawhip"),  
 locations=loc.body(columns=cs.starts\_with("profit"))  
 )  
)  
  
gt\_tbl\_8

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 3% | $567,960 | 4% | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | $2,045,250 | 7% | $181,080 | 1% | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | $288,750 | 1% | $241,770 | 2% | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | $404,250 | 1% | $70,010 | 0% | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | $846,000 | 3% | $364,530 | 2% | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | $1,113,250 | 4% | $748,120 | 5% | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | $3,137,250 | 11% | $817,680 | 6% | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | $3,801,000 | 13% | $2,910,290 | 20% | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | $756,250 | 3% | $617,520 | 4% | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

Make the text bold in the bottom row (the totals column).

gt\_tbl\_9 = (  
 gt\_tbl\_8  
 .tab\_style(  
 style=style.text(weight="bold"),  
 locations=loc.body(rows= pl.col("product") == "Total"  
 )  
)  
)  
  
gt\_tbl\_9

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 3% | $567,960 | 4% | [521, 494, 596, 613, 667, 748, 765, 686, 607, 594, 568, 751] |
| moka-pot.png | Moka pot | $2,045,250 | 7% | $181,080 | 1% | [4726, 4741, 4791, 5506, 6156, 6619, 6868, 6026, 5304, 4884, 4648, 6283] |
| cold-brew.png | Cold brew | $288,750 | 1% | $241,770 | 2% | [244, 249, 438, 981, 1774, 2699, 2606, 2348, 1741, 896, 499, 244] |
| filter.png | Filter | $404,250 | 1% | $70,010 | 0% | [2067, 1809, 1836, 2123, 2252, 2631, 2562, 2367, 2164, 2195, 2070, 2744] |
| drip-machine.png | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | [2137, 1623, 1971, 2097, 2580, 2456, 2336, 2316, 2052, 1967, 1837, 2328] |
| aeropress.png | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | [6332, 5199, 6367, 7024, 7906, 8704, 8693, 7797, 6828, 6963, 6877, 9270] |
| pour-over.png | Pour over | $846,000 | 3% | $364,530 | 2% | [1562, 1291, 1511, 1687, 1940, 2177, 2141, 1856, 1715, 1806, 1601, 2165] |
| french-press.png | French press | $1,113,250 | 4% | $748,120 | 5% | [3507, 2880, 3346, 3792, 3905, 4095, 4184, 4428, 3279, 3420, 3297, 4819] |
| cezve.png | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | [12171, 11469, 11788, 13630, 15391, 16532, 17090, 14433, 12985, 12935, 11598, 15895] |
| chemex.png | Chemex | $3,137,250 | 11% | $817,680 | 6% | [4938, 4167, 5235, 6000, 6358, 6768, 7112, 6249, 5605, 6076, 4980, 7220] |
| scale.png | Scale | $3,801,000 | 13% | $2,910,290 | 20% | [1542, 1566, 1681, 2028, 2425, 2549, 2569, 2232, 2036, 2089, 1693, 3180] |
| kettle.png | Kettle | $756,250 | 3% | $617,520 | 4% | [1139, 1023, 1087, 1131, 1414, 1478, 1456, 1304, 1140, 1233, 1193, 1529] |
| espresso-machine.png | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | [686, 840, 618, 598, 2148, 533, 797, 996, 1002, 668, 858, 2577] |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

## 1.6 Three Last Things

Add a column of bar plots using the monthly revenue column.

gt\_tbl\_10 = (  
 gt\_tbl\_9  
 .fmt\_nanoplot(  
 columns="monthly\_sales",  
 plot\_type="bar"  
 )  
)  
  
gt\_tbl\_10

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
| grinder.png | Grinder | $904,500 | 3% | $567,960 | 4% | 7650521494596613667748765686607594568751 |
| moka-pot.png | Moka pot | $2,045,250 | 7% | $181,080 | 1% | 6.87K04.73K4.74K4.79K5.51K6.16K6.62K6.87K6.03K5.30K4.88K4.65K6.28K |
| cold-brew.png | Cold brew | $288,750 | 1% | $241,770 | 2% | 2.70K02442494389811.77K2.70K2.61K2.35K1.74K896499244 |
| filter.png | Filter | $404,250 | 1% | $70,010 | 0% | 2.74K02.07K1.81K1.84K2.12K2.25K2.63K2.56K2.37K2.16K2.19K2.07K2.74K |
| drip-machine.png | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | 2.58K02.14K1.62K1.97K2.10K2.58K2.46K2.34K2.32K2.05K1.97K1.84K2.33K |
| aeropress.png | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | 9.27K06.33K5.20K6.37K7.02K7.91K8.70K8.69K7.80K6.83K6.96K6.88K9.27K |
| pour-over.png | Pour over | $846,000 | 3% | $364,530 | 2% | 2.18K01.56K1.29K1.51K1.69K1.94K2.18K2.14K1.86K1.72K1.81K1.60K2.16K |
| french-press.png | French press | $1,113,250 | 4% | $748,120 | 5% | 4.82K03.51K2.88K3.35K3.79K3.90K4.10K4.18K4.43K3.28K3.42K3.30K4.82K |
| cezve.png | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | 17.1K012.2K11.5K11.8K13.6K15.4K16.5K17.1K14.4K13.0K12.9K11.6K15.9K |
| chemex.png | Chemex | $3,137,250 | 11% | $817,680 | 6% | 7.22K04.94K4.17K5.24K6.00K6.36K6.77K7.11K6.25K5.60K6.08K4.98K7.22K |
| scale.png | Scale | $3,801,000 | 13% | $2,910,290 | 20% | 3.18K01.54K1.57K1.68K2.03K2.42K2.55K2.57K2.23K2.04K2.09K1.69K3.18K |
| kettle.png | Kettle | $756,250 | 3% | $617,520 | 4% | 1.53K01.14K1.02K1.09K1.13K1.41K1.48K1.46K1.30K1.14K1.23K1.19K1.53K |
| espresso-machine.png | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | 2.58K06868406185982.15K5337979961.00K6688582.58K |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

Add images to the icon column. The images are in the img directory.

gt\_tbl\_11 = (  
 gt\_tbl\_10.fmt\_image(  
 columns="icon",  
 path=r"C:\Users\Hon.Olayinka\Desktop\Data Science\Posit PBC\img"   
)  
)  
  
gt\_tbl\_11

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
|  | Grinder | $904,500 | 3% | $567,960 | 4% | 7650521494596613667748765686607594568751 |
|  | Moka pot | $2,045,250 | 7% | $181,080 | 1% | 6.87K04.73K4.74K4.79K5.51K6.16K6.62K6.87K6.03K5.30K4.88K4.65K6.28K |
|  | Cold brew | $288,750 | 1% | $241,770 | 2% | 2.70K02442494389811.77K2.70K2.61K2.35K1.74K896499244 |
|  | Filter | $404,250 | 1% | $70,010 | 0% | 2.74K02.07K1.81K1.84K2.12K2.25K2.63K2.56K2.37K2.16K2.19K2.07K2.74K |
|  | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | 2.58K02.14K1.62K1.97K2.10K2.58K2.46K2.34K2.32K2.05K1.97K1.84K2.33K |
|  | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | 9.27K06.33K5.20K6.37K7.02K7.91K8.70K8.69K7.80K6.83K6.96K6.88K9.27K |
|  | Pour over | $846,000 | 3% | $364,530 | 2% | 2.18K01.56K1.29K1.51K1.69K1.94K2.18K2.14K1.86K1.72K1.81K1.60K2.16K |
|  | French press | $1,113,250 | 4% | $748,120 | 5% | 4.82K03.51K2.88K3.35K3.79K3.90K4.10K4.18K4.43K3.28K3.42K3.30K4.82K |
|  | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | 17.1K012.2K11.5K11.8K13.6K15.4K16.5K17.1K14.4K13.0K12.9K11.6K15.9K |
|  | Chemex | $3,137,250 | 11% | $817,680 | 6% | 7.22K04.94K4.17K5.24K6.00K6.36K6.77K7.11K6.25K5.60K6.08K4.98K7.22K |
|  | Scale | $3,801,000 | 13% | $2,910,290 | 20% | 3.18K01.54K1.57K1.68K2.03K2.42K2.55K2.57K2.23K2.04K2.09K1.69K3.18K |
|  | Kettle | $756,250 | 3% | $617,520 | 4% | 1.53K01.14K1.02K1.09K1.13K1.41K1.48K1.46K1.30K1.14K1.23K1.19K1.53K |
|  | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | 2.58K06868406185982.15K5337979961.00K6688582.58K |
| None | Total | $29,448,500 | 100% | $14,793,150 | 100% | None |

Turn the None cells into blank cells.

gt\_tbl\_12 = (  
 gt\_tbl\_11  
 .sub\_missing(missing\_text="")  
)  
  
gt\_tbl\_12

| Coffee Equipment Sales for 2023 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| icon | product | Revenue | | Profit | | Monthly Sales |
| Amount | Percent | Amount | Percent |
|  | Grinder | $904,500 | 3% | $567,960 | 4% | 7650521494596613667748765686607594568751 |
|  | Moka pot | $2,045,250 | 7% | $181,080 | 1% | 6.87K04.73K4.74K4.79K5.51K6.16K6.62K6.87K6.03K5.30K4.88K4.65K6.28K |
|  | Cold brew | $288,750 | 1% | $241,770 | 2% | 2.70K02442494389811.77K2.70K2.61K2.35K1.74K896499244 |
|  | Filter | $404,250 | 1% | $70,010 | 0% | 2.74K02.07K1.81K1.84K2.12K2.25K2.63K2.56K2.37K2.16K2.19K2.07K2.74K |
|  | Drip machine | $2,632,000 | 9% | $1,374,450 | 9% | 2.58K02.14K1.62K1.97K2.10K2.58K2.46K2.34K2.32K2.05K1.97K1.84K2.33K |
|  | AeroPress | $2,601,500 | 9% | $1,293,780 | 9% | 9.27K06.33K5.20K6.37K7.02K7.91K8.70K8.69K7.80K6.83K6.96K6.88K9.27K |
|  | Pour over | $846,000 | 3% | $364,530 | 2% | 2.18K01.56K1.29K1.51K1.69K1.94K2.18K2.14K1.86K1.72K1.81K1.60K2.16K |
|  | French press | $1,113,250 | 4% | $748,120 | 5% | 4.82K03.51K2.88K3.35K3.79K3.90K4.10K4.18K4.43K3.28K3.42K3.30K4.82K |
|  | Cezve | $2,512,500 | 9% | $1,969,520 | 13% | 17.1K012.2K11.5K11.8K13.6K15.4K16.5K17.1K14.4K13.0K12.9K11.6K15.9K |
|  | Chemex | $3,137,250 | 11% | $817,680 | 6% | 7.22K04.94K4.17K5.24K6.00K6.36K6.77K7.11K6.25K5.60K6.08K4.98K7.22K |
|  | Scale | $3,801,000 | 13% | $2,910,290 | 20% | 3.18K01.54K1.57K1.68K2.03K2.42K2.55K2.57K2.23K2.04K2.09K1.69K3.18K |
|  | Kettle | $756,250 | 3% | $617,520 | 4% | 1.53K01.14K1.02K1.09K1.13K1.41K1.48K1.46K1.30K1.14K1.23K1.19K1.53K |
|  | Espresso Machine | $8,406,000 | 29% | $3,636,440 | 25% | 2.58K06868406185982.15K5337979961.00K6688582.58K |
|  | Total | $29,448,500 | 100% | $14,793,150 | 100% |  |