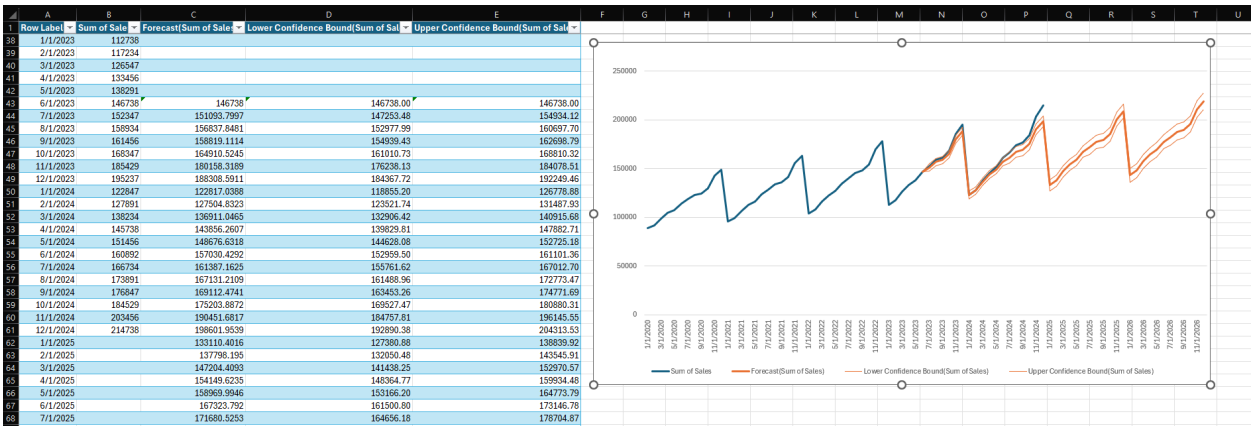
Jonathan Maas
www.theprototyper.design

# Forecasting in Excel – Quick Start Guide



| Row Label | Sum of Sales | Forecast(Sum of Sales) | Lower Confidence Bound(Sum of Sales) | Upper Confidence Bound(Sum of Sales) |
|---|---|---|---|---|
| 1/1/2023 | 112738 | | | |
| 2/1/2023 | 117234 | | | |
| 3/1/2023 | 126547 | | | |
| 4/1/2023 | 133456 | | | |
| 5/1/2023 | 138291 | | | |
| 6/1/2023 | 146738 | 146738 | 146738.00 | 146738.00 |
| 7/1/2023 | 152347 | 151093.7997 | 147253.48 | 154934.12 |
| 8/1/2023 | 158934 | 156837.8481 | 152977.99 | 160697.70 |
| 9/1/2023 | 161456 | 158819.1114 | 154939.43 | 162698.79 |
| 10/1/2023 | 168347 | 164910.5245 | 161010.73 | 168810.32 |
| 11/1/2023 | 185429 | 180158.3189 | 176238.13 | 184078.51 |
| 12/1/2023 | 195237 | 188308.5911 | 184367.72 | 192249.46 |
| 1/1/2024 | 122847 | 122817.0388 | 118855.20 | 126778.88 |
| 2/1/2024 | 127891 | 127504.8323 | 123521.74 | 131487.93 |
| 3/1/2024 | 138234 | 136911.0465 | 132906.42 | 140915.68 |
| 4/1/2024 | 145738 | 143856.2607 | 139829.81 | 147882.71 |
| 5/1/2024 | 151456 | 148676.6318 | 144628.08 | 152725.18 |
| 6/1/2024 | 160892 | 157030.4292 | 152959.50 | 161101.36 |
| 7/1/2024 | 166734 | 161387.1625 | 155761.62 | 167012.70 |
| 8/1/2024 | 173891 | 167131.2109 | 161488.96 | 172773.47 |
| 9/1/2024 | 176847 | 169112.4741 | 163453.26 | 174771.69 |
| 10/1/2024 | 184529 | 175203.8872 | 169527.47 | 180880.31 |
| 11/1/2024 | 203456 | 190451.6817 | 184757.81 | 196145.55 |
| 12/1/2024 | 214738 | 198601.9539 | 192890.38 | 204313.53 |
| 1/1/2025 | | 133110.4016 | 127380.88 | 138839.92 |
| 2/1/2025 | | 137798.195 | 132050.48 | 143545.91 |
| 3/1/2025 | | 147204.4093 | 141438.25 | 152970.57 |
| 4/1/2025 | | 154149.6235 | 148364.77 | 159934.48 |
| 5/1/2025 | | 158969.9946 | 153166.20 | 164773.79 |
| 6/1/2025 | | 167323.792 | 161500.80 | 173146.78 |
| 7/1/2025 | | 171680.5253 | 164656.18 | 178704.87 |

## Contents



## What this is

This is a quick guide to Forecasting in Excel – let's begin!

Jonathan Maas
www.theprototyper.design

# Steps

## Step 1 – Take a look at your raw data

First, let's say you have some sales data

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Date | Year | Month | Quarter | Sales | YoY_Growth_Percent |
| 2 | 1/1/2020 | 2020 | 1 | Q1 | 89247 | |
| 3 | 2/1/2020 | 2020 | 2 | Q1 | 91856 | |
| 4 | 3/1/2020 | 2020 | 3 | Q1 | 98742 | |
| 5 | 4/1/2020 | 2020 | 4 | Q2 | 104583 | |
| 6 | 5/1/2020 | 2020 | 5 | Q2 | 107329 | |
| 7 | 6/1/2020 | 2020 | 6 | Q2 | 113895 | |
| 8 | 7/1/2020 | 2020 | 7 | Q3 | 118764 | |
| 9 | 8/1/2020 | 2020 | 8 | Q3 | 122847 | |
| 10 | 9/1/2020 | 2020 | 9 | Q3 | 124591 | |
| 11 | 10/1/2020 | 2020 | 10 | Q4 | 129745 | |
| 12 | 11/1/2020 | 2020 | 11 | Q4 | 142638 | |
| 13 | 12/1/2020 | 2020 | 12 | Q4 | 148972 | |
| 14 | 1/1/2021 | 2021 | 1 | Q1 | 95847 | 7.4 |
| 15 | 2/1/2021 | 2021 | 2 | Q1 | 99234 | 8 |
| 16 | 3/1/2021 | 2021 | 3 | Q1 | 106891 | 8.3 |
| 17 | 4/1/2021 | 2021 | 4 | Q2 | 112756 | 7.8 |
| 18 | 5/1/2021 | 2021 | 5 | Q2 | 116328 | 8.4 |

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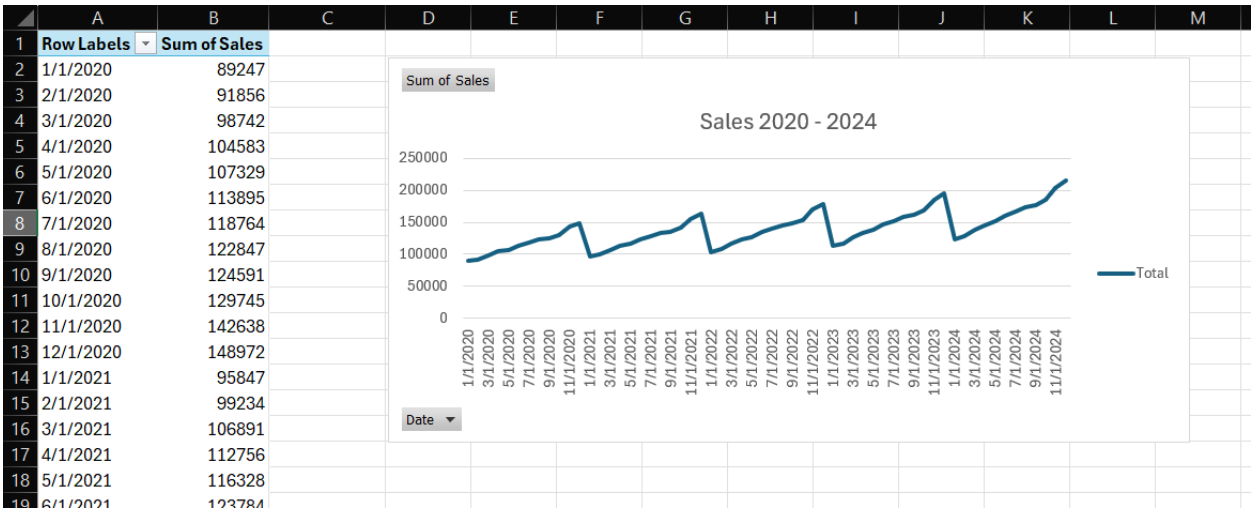
www.theprototyper.design

# Step 2 – Make a PivotTable and PivotChart with evenly spaced dates.

To best process this, Excel likes evenly spaced dates, so just bring in the Date and the Sales. Year 2020 Month 1 is a date, Year 2020 Q1 is a date, but Excel recognizes month beginnings very well – even though they are technically not perfectly spaced. Regardless, bring them in on a PivotTable, and then make a PivotChart to generally see the shape of your values.



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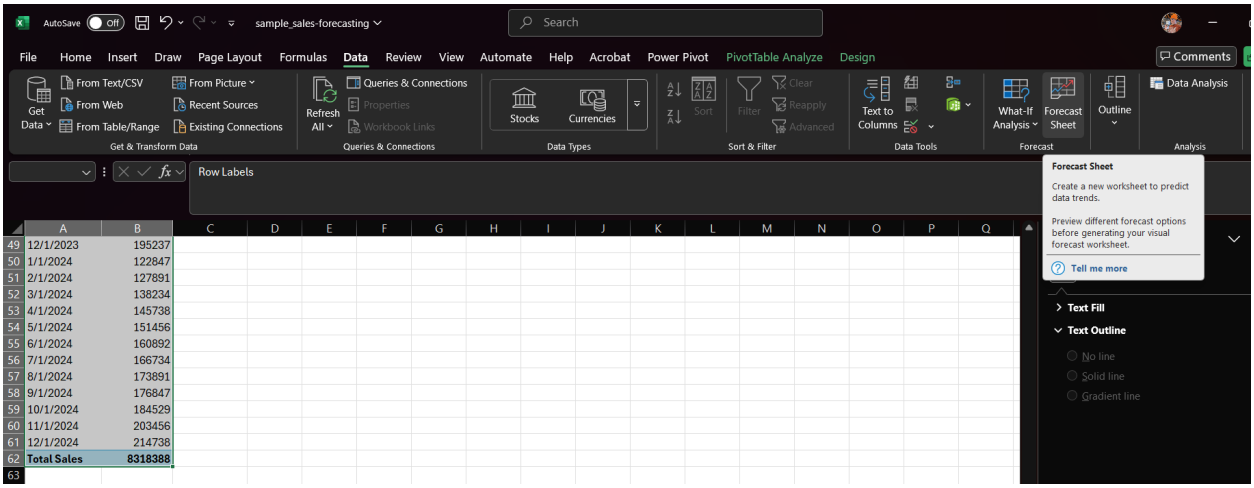
# Step 3 – Select the columns in your PivotTable, and begin Forecasting

Select both columns with CTRL-Shift- › and then CTRL-Shift-$_V$, and then begin Forecasting with Forecasting.ETS, or the Forecasting wizard with Data > Forecasting with Forecasting.ETS.



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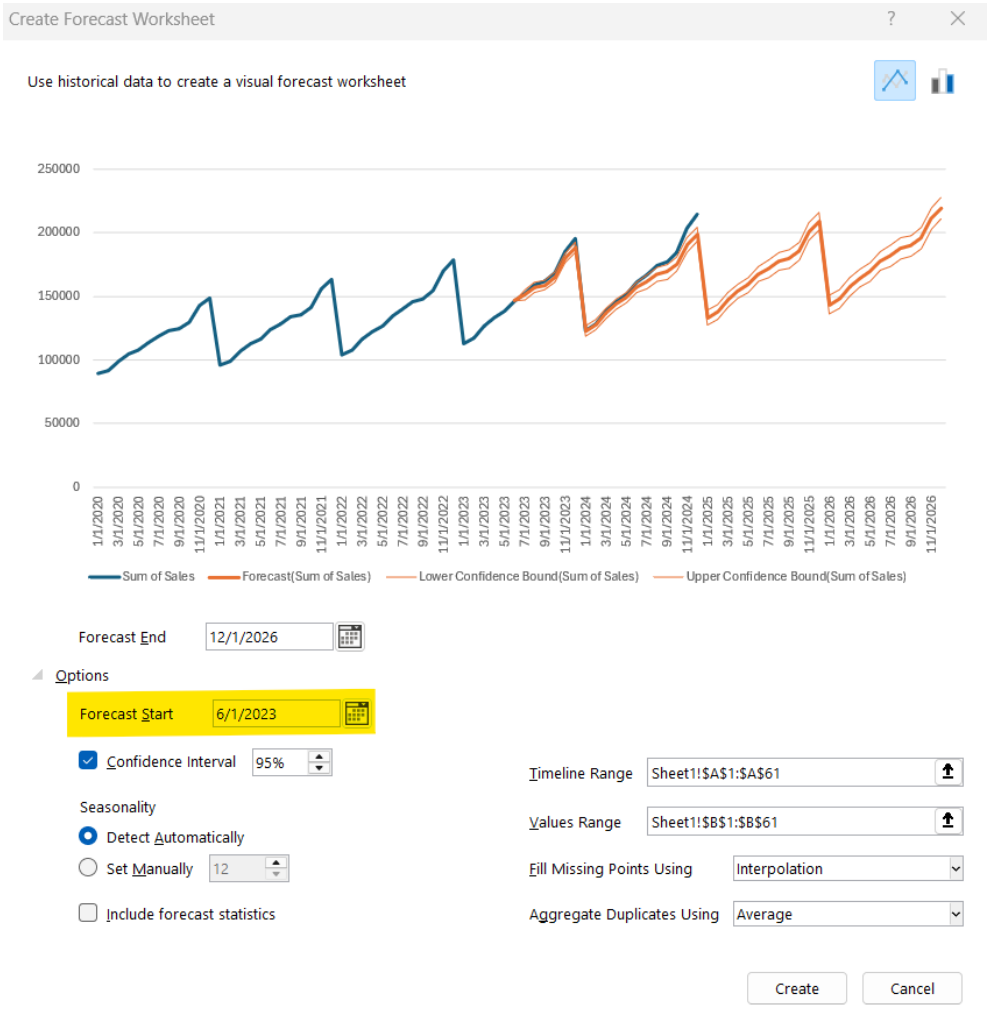
# Step 4 – Set your parameters in Options

## And be sure to begin forecasting -before- your actual data ends

That will make a new sheet with a default time projection, and a new chart with 95% Confidence intervals. Go to the options first – the most important thing is to begin your projection before your actual data ends, and your projection begins. This allows you to see how accurate it is. Fill in the rest of the values if you can – sometimes you have to set the Seasonality to 4 for seasonal, sometimes 12 is OK, or other time projections.



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# Step 5 – Compare your actual data vs the projected data before the true projection begins

Take a look at your numerical projections, projected for actuals you already have vs actual. In the below case, our projected sales are not far off, but the median line is consistently lower than the actuals.

| | Row Labels | Sum of Sales | Forecast(Sum of Sales) | Lower Confidence Bound(Sum of Sales | Upper Confidence Bound(Sum of Sales |
|---|---|---|---|---|---|
| 34 | 9/1/2022 | 147891 | | | |
| 35 | 10/1/2022 | 154236 | | | |
| 36 | 11/1/2022 | 169847 | | | |
| 37 | 12/1/2022 | 178456 | | | |
| 38 | 1/1/2023 | 112738 | | | |
| 39 | 2/1/2023 | 117234 | | | |
| 40 | 3/1/2023 | 126547 | | | |
| 41 | 4/1/2023 | 133456 | | | |
| 42 | 5/1/2023 | 138291 | | | |
| 43 | 6/1/2023 | 146738 | 146738 | 146738.00 | 146738.00 |
| 44 | 7/1/2023 | 152347 | 151093.7997 | 147253.48 | 154934.12 |
| 45 | 8/1/2023 | 158934 | 156837.8481 | 152977.99 | 160697.70 |
| 46 | 9/1/2023 | 161456 | 158819.1114 | 154939.43 | 162698.79 |
| 47 | 10/1/2023 | 168347 | 164910.5245 | 161010.73 | 168810.32 |
| 48 | 11/1/2023 | 185429 | 180158.3189 | 176238.13 | 184078.51 |
| 49 | 12/1/2023 | 195237 | 188308.5911 | 184367.72 | 192249.46 |
| 50 | 1/1/2024 | 122847 | 122817.0388 | 118855.20 | 126778.88 |
| 51 | 2/1/2024 | 127891 | 127504.8323 | 123521.74 | 131487.93 |
| 52 | 3/1/2024 | 138234 | 136911.0465 | 132906.42 | 140915.68 |

# How should we resolve these discrepancies?

## Should we resolve them at all?

To resolve this we can do a few things:

A. Leave as is, just keep in mind it is skewing a bit low
B. Skew the forecasting up
C. Do another analysis with ARIMA (Autoregressive integrated moving average), perhaps with a different program like Python.

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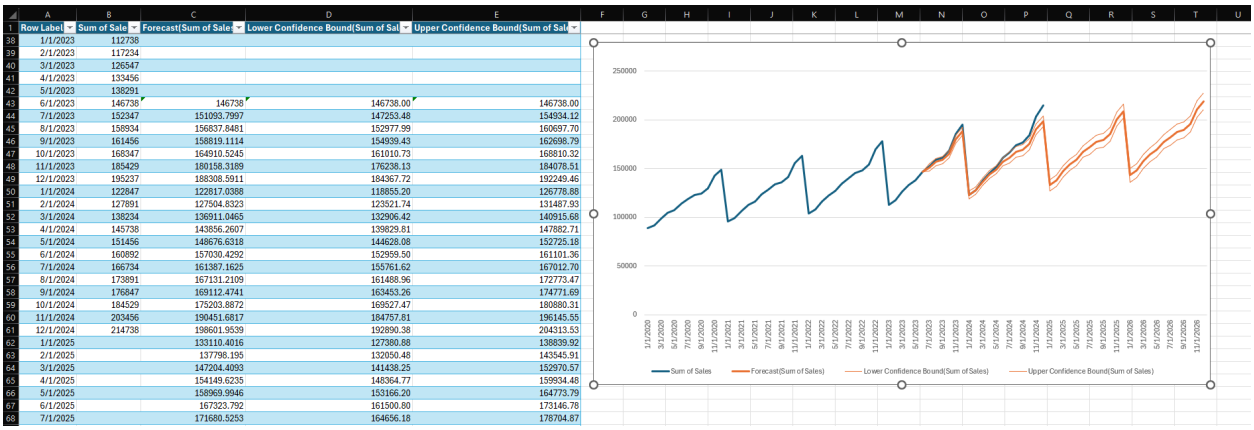
# Step 6 – Whatever the case, you have a forecasting projection

Now you have a Forecasting projection!



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| 6/1/2023 | 146738 | 146738 | 146738.00 | 146738.00 |
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| 8/1/2023 | 158934 | 156837.8481 | 152977.99 | 160697.70 |
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| 8/1/2024 | 173891 | 167131.2109 | 161488.96 | 172773.47 |
| 9/1/2024 | 176847 | 169112.4741 | 163453.26 | 174771.69 |
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| 4/1/2025 | | 154149.6235 | 148364.77 | 159934.48 |
| 5/1/2025 | | 158969.9946 | 153166.20 | 164773.79 |
| 6/1/2025 | | 167323.792 | 161500.80 | 173146.78 |
| 7/1/2025 | | 171680.5253 | 164656.18 | 178704.87 |