

# Financial Dashboards

FINANCIAL ANALYSIS IN POWER BI

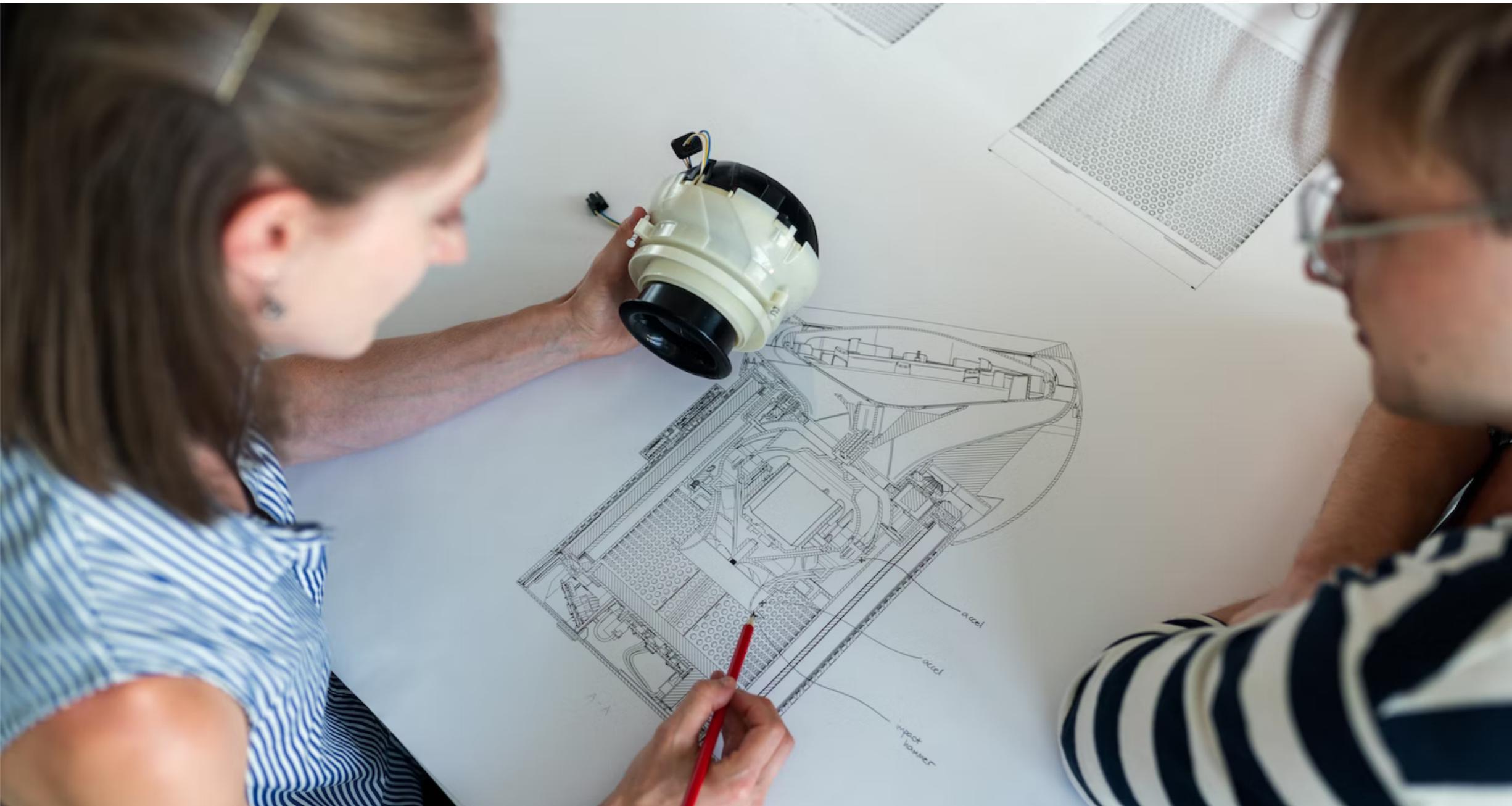


Nick Edwards  
Capital Markets Analyst

# Expectations

- This is an intermediate course
  - Familiar with DAX, Data Modeling and Visualizations in Power BI
- Prerequisites
  1. Intermediate DAX in Power BI
  2. Data Modeling in Power BI
- No finance experience needed!

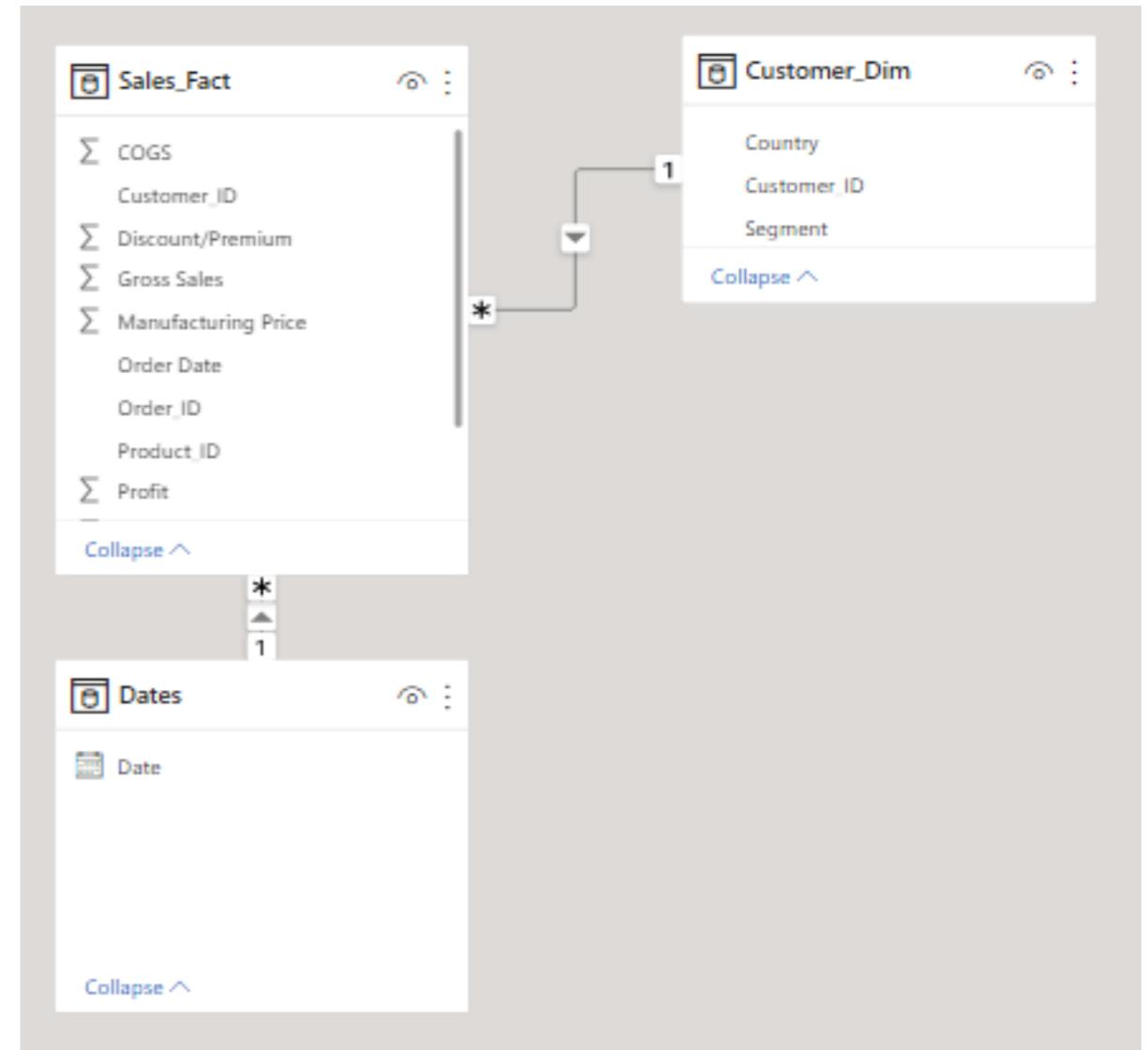
# Spaero Technology



<sup>1</sup> Photo by @thisengineering on Unsplash

# The data

- Sales data from 2015 - 2021
- Follows a "Star Schema"
  - Sales\_Fact
  - Customer\_Dim
  - Dates



# Key performance indicators (KPIs)

Financial analysis examines the financial performance of an asset or company to drive decision making and set goals.

## Key Performance Indicators (KPIs)

- KPIs depend on the audience and business goals
  - Collaboration is key!



<sup>1</sup> Photo by Luke Southern on Unsplash

# Objectives and key results (OKRs)

1. The **objective** is the main business goal and focus.
2. **Key results** specify the results of the objective and set benchmarks.
3. **Initiatives** are the individual tasks to achieve the key results.



<sup>1</sup> <https://businessanalystmentor.com/okr/>

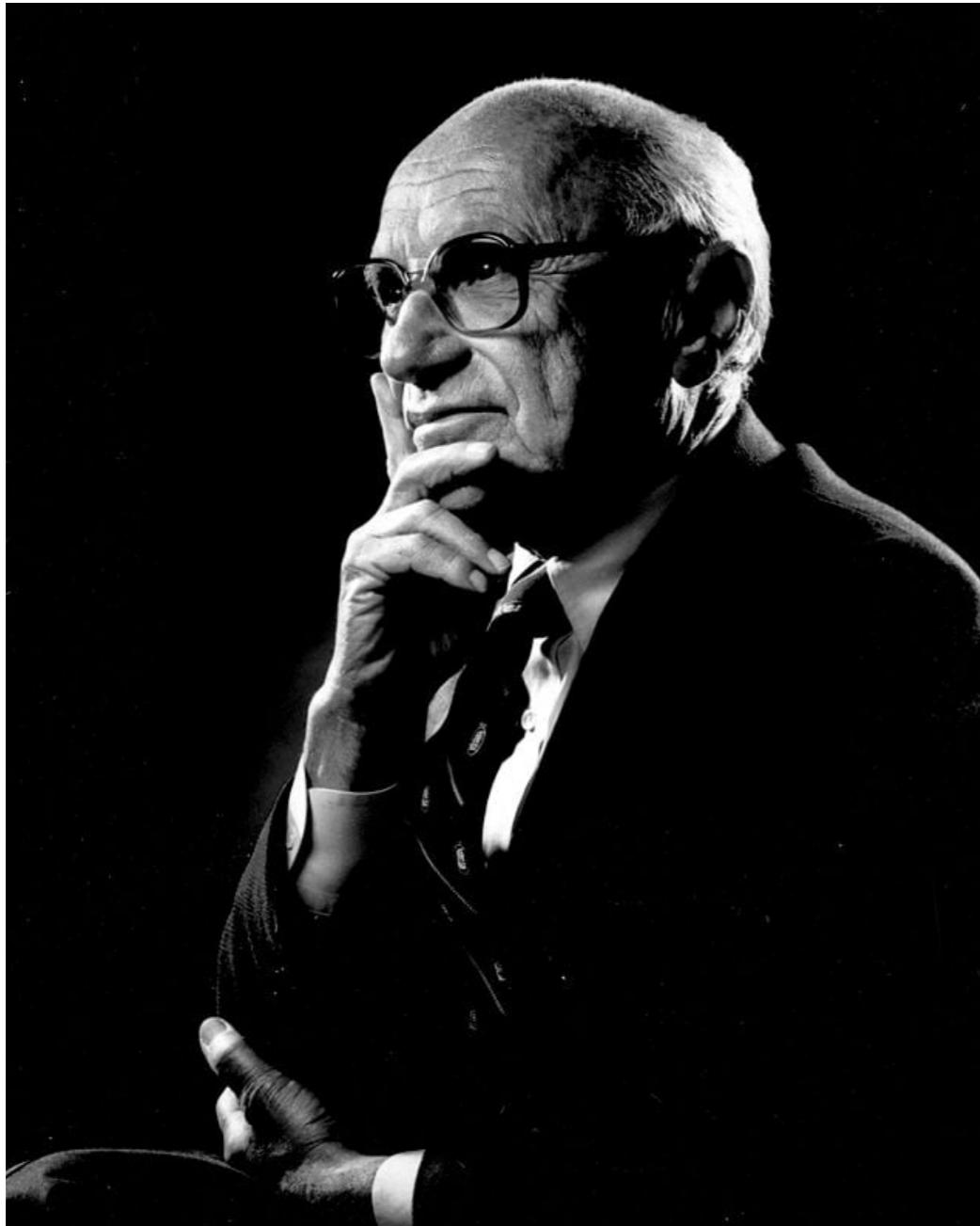
# Objectives and key results (OKRs)

1. The **objective** is the main business goal and focus.
2. **Key results** specify the results of the objective and set benchmarks.
3. **Initiatives** are the individual tasks to achieve the key results.



<sup>1</sup> <https://www.perdoo.com/how-to-write-great-okrs/>

# Profitability



**"The social responsibility of business is to increase its profits." - Milton Friedman**

<sup>1</sup> Photo by The Friedman Foundation for Educational Choice

# Profitability

## Net Income

$$\text{Net Income} = \text{Revenue} - \text{Expenses}$$

- **Revenue** is income earned
- **Expenses** are money paid

## Levels of profitability

- Net income > 0 = **profit**
- Net income < 0 = **loss**
- Net income = 0 = **break-even**

# Profitability

## Net Income

$$\text{Net Income} = \text{Revenue} - \text{Expenses}$$

- Revenue is income earned
- Expenses are money paid

## Levels of profitability

- Net income > 0 = **profit**
- Net income < 0 = **loss**
- Net income = 0 = **break-even**

## Profit Margin

$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Revenue}}$$

- Commonly used in business
- Ratios are useful in comparisons because they ignore size

# Other common KPIs

- There are endless amounts of KPIs!
  - Total Revenue
  - Revenue per Customer
  - Revenue Growth
  - Client Retention
  - Customer Satisfaction

# **Let's practice!**

**FINANCIAL ANALYSIS IN POWER BI**

# KPIs in Power BI

FINANCIAL ANALYSIS IN POWER BI



Nick Edwards

Capital Markets Analyst

# **Let's practice!**

**FINANCIAL ANALYSIS IN POWER BI**

# Artificial Intelligence

## FINANCIAL ANALYSIS IN POWER BI



**Nick Edwards**  
Capital Markets Analyst

# Let the robots take over...



<sup>1</sup> Photo by Daniel Jurena from Prague, Czech Republic

# Let the robots take over... our spreadsheets!



AI has its place in financial analytics to automate tasks, reports, and insights

- **FinTech:** financial technology
- **Big data:** massive amounts of data

<sup>1</sup> Photo by markusspiske on Unsplash

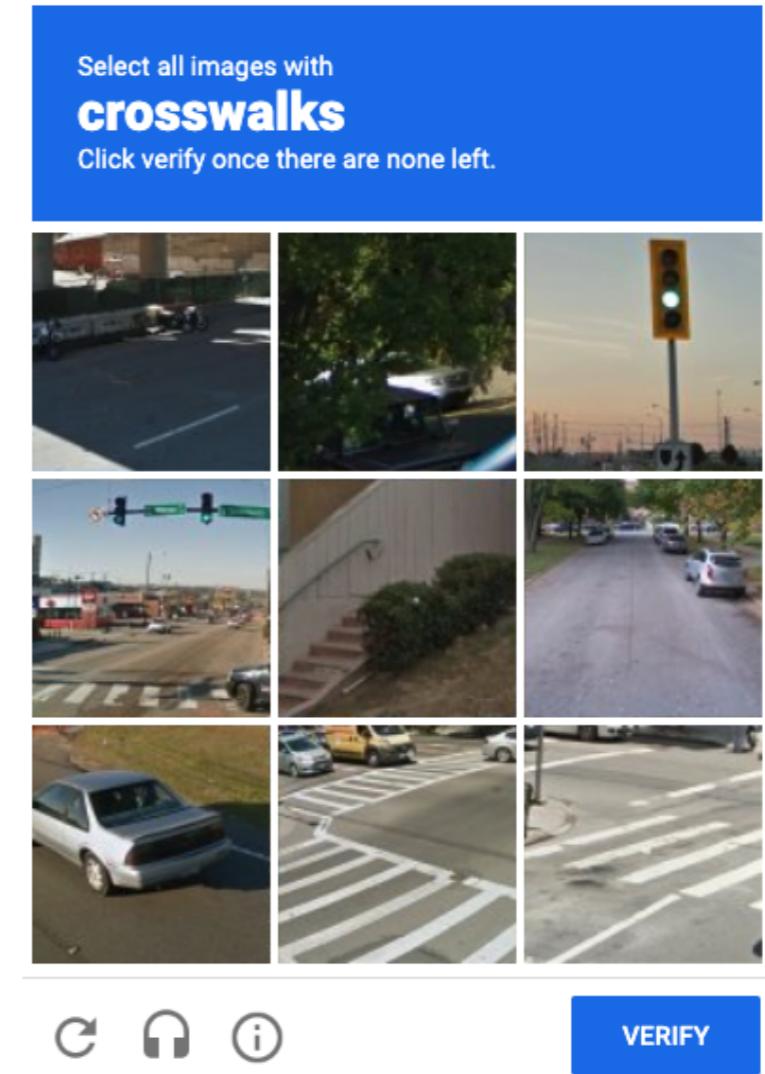
# Artificial intelligence (AI)

Artificial intelligence (AI) is computer programmed human intelligence

- Made up of complex algorithms to mimic human intelligence
- Can analyze data faster than humans, more consistently

Machine Learning is AI that can improve when feedback is provided

- Social media likes and views
- reCaptcha image verifications



<sup>1</sup> <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence>

# Forecasting

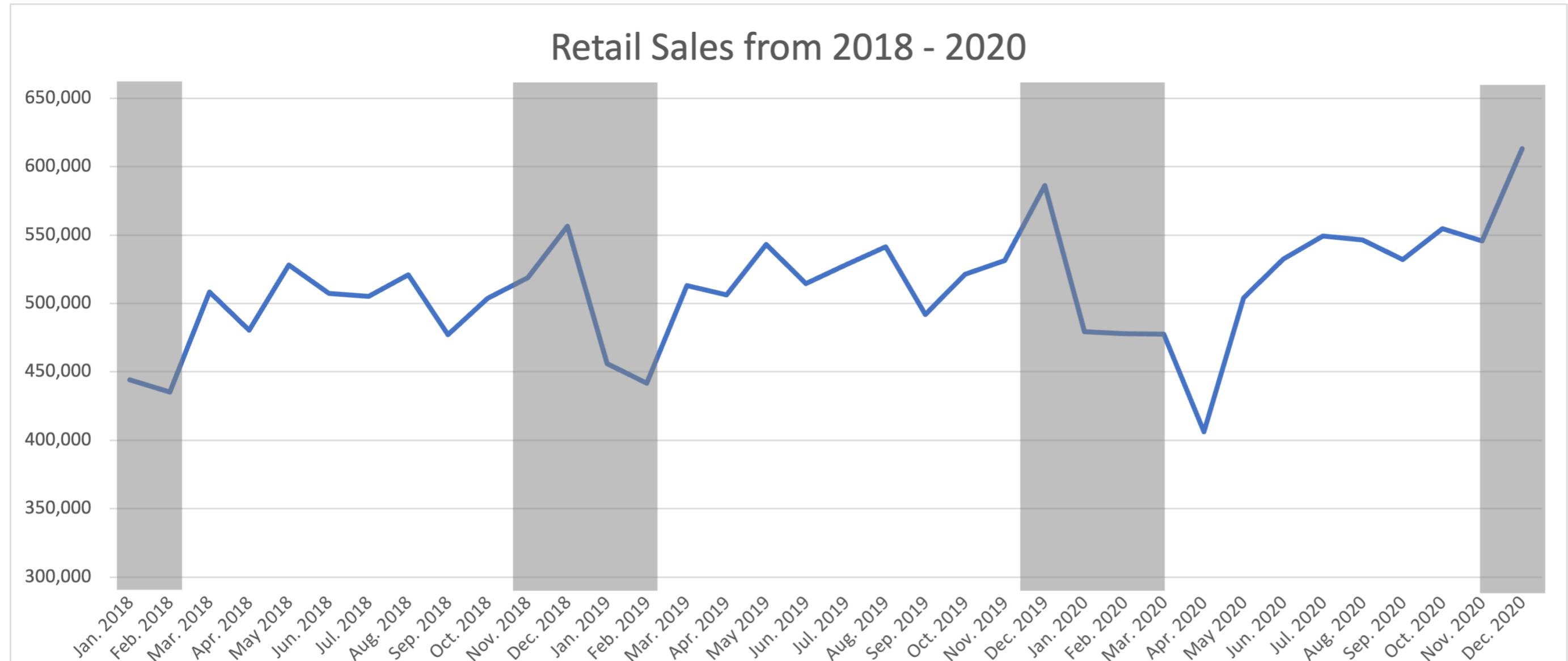


- **Forecasting** is the process of predicting or estimating a future outcome
  - Financial planning and budgeting (i.e., find future sales)
- Power BI uses an **exponential smoothing** algorithm
  - Historical data informs the predictions
  - Finds trends and reduces the "noise" of deviations

<sup>1</sup> <https://powerbi.microsoft.com/es-mx/blog/describing-the-forecasting-models-in-power-view/>

# Seasonality

- **Seasonality** is the correlation between time of year and performance



<sup>1</sup> <https://www.census.gov/retail/index.html>

# **Let's practice!**

**FINANCIAL ANALYSIS IN POWER BI**

# AI visualizations in Power BI

FINANCIAL ANALYSIS IN POWER BI



Nick Edwards  
Capital Markets Analyst

# **Let's practice!**

**FINANCIAL ANALYSIS IN POWER BI**