**Data Analytics Portfolio Project - Week 1 Summary**

**Project Title:**

Sales Decline Investigation - Laptop Sales (South Region, May-June 2025)

# Step 1: Understanding the Business Problem

An e-commerce company observed a significant decline in laptop sales in certain regions. I was tasked with investigating the cause of the drop in sales using real sales data, starting with the South region.

# Step 2: Loading and Exploring Data in Excel

I entered the provided sales dataset into Microsoft Excel. I added a 'Month' column using the TEXT formula (=TEXT(Date, "mmmm")) to categorize sales by month.

# Step 3: Filtering and Aggregating the Data

I used Excel's Filter tool and the SUMIFS function to calculate total laptop revenue by region for May and June 2025. For example:

- =SUMIFS(G:G, B:B, "South", D:D, "Laptop", H:H, "May")

# Step 4: Calculating Percentage Changes

I calculated percentage change in sales between May and June using the formula:

- =(June - May)/May

This helped quantify how much sales dropped or increased in each region.

# Step 5: Creating a Comparison Table

I summarized regional sales and % change in a table showing:

South (-44%), East (-71%), North (-30%), West (+158%).

# Step 6: Building a Column Chart

Using Excel's Insert > Chart > Clustered Column option, I created a side-by-side bar chart showing May vs June laptop revenue by region.

# Step 7: Writing the SMART Problem Statement

I structured the business issue using the SMART framework to clearly state the drop in sales, its impact, and the analysis timeline (5 working days).

# Step 8: Identifying Stakeholders

I listed relevant stakeholders: Sales Manager, Marketing Lead, Supply Chain, Product/Pricing Manager, and Customer Service.

# Step 9: Creating the 1-Page Business Document

I summarized the business problem, stakeholders, SMART goal, and Excel findings into a single PDF report.

**Step 10: Creating a 3-Slide Stakeholder Report** In Microsoft PowerPoint, I designed a 3-slide report:

* Slide 1: Sales drop summary + chart
* Slide 2: My analysis plan
* Slide 3: What I need from stakeholders

# Tools Used

* Microsoft Excel (data cleaning, SUMIFS, charts)
* Microsoft Word (business summary)
* PowerPoint (stakeholder presentation)
* FPDF & Python (for documentation)