Digital Marketing Practicum

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1. What is Marketing?

Marketing is the **process of identifying customer needs**, creating value, communicating that value, and delivering products/services that satisfy customer expectations.

Key points:

- It connects **business offerings** with **customer demand**
- Involves activities like research, branding, advertising, pricing, selling, and customer relationship management
- It aims to build **long-term trust and customer loyalty**

Simple definition:

"Marketing is understanding what people need, providing it better than competitors, and creating meaningful relationships with customers."

2. Why is Marketing Important?

Marketing is important because it:

1. Generates Awareness

People must know your brand exists before they consider buying.

2. Attracts and Retains Customers

Marketing brings in customers and keeps them engaged with value.

3. Helps Understand the Market

Through surveys, analytics, and research, businesses know:

- What customers like
- What problems they face
- What competitors are offering

4. Drives Revenue

Good marketing directly increases sales and business growth.

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5. Builds Brand Image

Strong marketing builds trust, credibility, and loyalty.

6. Supports Decision-Making

Marketing insights guide:

- Pricing decisions
- Product updates
- Distribution strategies
- Investment choices

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3. Why Digital Marketing Practicum?

A **practicum** means **hands-on, practical training**.

Digital Marketing Practicum is included in the course because:

1. Real-World Application

Students learn by doing:

- Running simulated campaigns
- Creating ad creatives
- Analyzing performance metrics

2. Industry Tools & Practical Exposure

Students practice using the same tools that professionals use.

3. Skill Development for Modern Jobs

Industries demand digital skills such as:
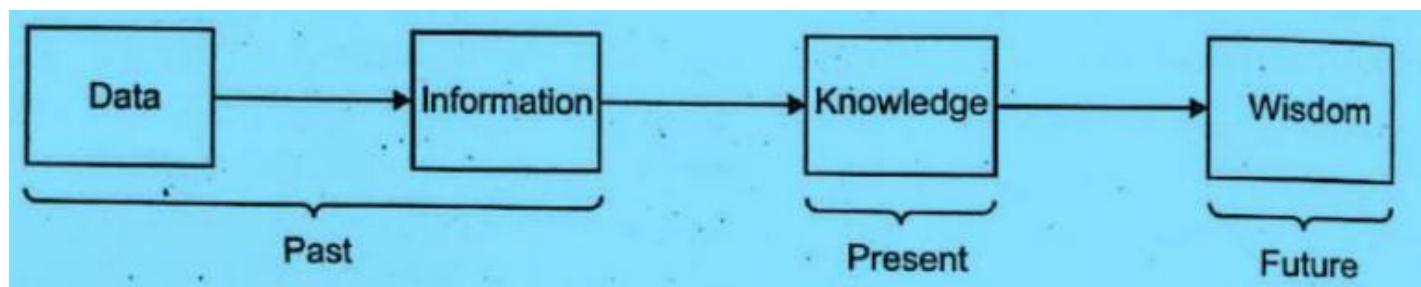
- SEO
- Social media marketing
- Google Ads
- Data analytics

4. Decision-Making Using Data

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5. Builds a Professional Portfolio

Students complete:

- Campaign plans

- Case studies

- Automation workflows

- Analytics dashboards

These are valuable for jobs and internships.

4. What Software Tools Are Needed?

Digital marketing requires both **technical tools** and **data tools**.

A. Analytical & Data Tools

Purpose	Tools
Data cleaning, model building	**Google Colab**, Jupyter Notebook, Python
Website traffic analysis	**Google Analytics 4 (GA4)**
Keyword + SEO research	Ubersuggest, SEMrush (freemium options)

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B. Content & Creative Tools

Purpose	Tools
Graphics & ad design	**Canva**, Adobe Express
Video editing	CapCut, Canva Video

C. Advertising & Performance Tools

Purpose	Tools
Social media ads	**Meta Ads Manager**, TikTok Ads
Search engine ads	**Google Ads**
Email automation	Mailchimp, HubSpot

D. Marketing Automation Tools

Purpose	Tools
CRM + Automation	**HubSpot**, Zoho CRM
Customer segmentation	Google Analytics, HubSpot

E. Collaboration Tools

Purpose	Tools
Project execution	Google Drive, Colab, Trello
Team communication	Slack, Teams

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5. Role of Data + Model + Result = Decision Making

In modern marketing, **data-driven decision-making** is essential.
This formula explains it:

📌 (1) DATA

Data comes from:

- Website visits

- Customer purchases

- Social media engagement

- Email campaign performance

- Market research

- Surveys

Examples:

- "Which ad clicked most?"

- "Which age group buys more often?"

- "What time does audience engage most?"

📌 (2) MODEL

A **model** uses data to generate insights or predictions.

Examples:

- Predict which customers might buy next

- Forecast sales for the next 30 days

- Identify customer segments

- Recommend marketing budget allocation

Tools used:
Python, Google Colab, Machine Learning, Analytics platforms.

📌 (3) RESULT

The model outputs measurable results:

- Expected revenue

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- Best customer segment
- Optimal price range
- Best performing channel
- Customer lifetime value (CLV)

📌 (4) DECISION MAKING

Top managers use these results to make **strategic decisions**.

Marketing Directors / CMOs decide:

- Which campaign to scale
- Which audience to target
- Which product to modify
- What budget to allocate
- Whether a strategy is profitable

Example:

If data shows:

- Instagram ads = high engagement
- Google Ads = high conversion
- Email = high retention

Then decision:
👉 Allocate more budget to high-conversion channels (Google Ads).

🔍 Simple Example

Dataset: Sales of products

Model: Predict which product will perform well next month

Result: Forecast suggests Product A will grow by 30%

Decision: Increase inventory + Run promotion campaign

This is exactly why digital marketing professionals must know:
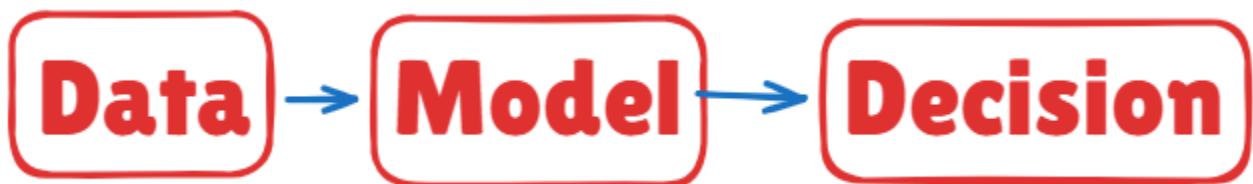**data analysis + tools + analytics + strategy.**

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Scenario 1

Working with single variables

Let's build a **simple marketing scenario**:

- **Input (X)** = Daily digital ad spend in USD (1 variable, 40 days)

- **Output (y)** = Daily new customers acquired

- We'll:

    o   Create **data**

    o   Train a **linear regression model**

    o   Use the **result for decision making** (e.g., "If we spend $800, how many customers can we expect?")

https://github.com/sanjeevlcc/notes_2081/blob/main/DM/MBA%20DMP/LAB_1.ipynb

How this matches Data → Model → Decision

1. **Data**

    o   We simulate 40 days: Ad_Spend_USD → New_Customers

    o   Visualize using a scatter plot.

2. **Model**

    o   Train LinearRegression with one input (ad spend) and one output (new customers).

    o   Print equation and performance (MAE, RMSE, R²).

3. **Decision**

    o   Compare two spend levels ($500 vs $800).

    o   Calculate **extra customers** and **cost per extra customer**.

    o   Print a simple **recommendation** for a manager (top role).

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Data → **Model** → **Decision**

fuel, primary
sec etc

engine

ML, AI, support

insights

drive,
walkthrough

Scenario 2

multiple linear regression

📌 **1. Scenario Overview (Email Marketing Focused)**

A company wants to evaluate **how its email marketing activities influence customer conversion**.
For 40 days, the marketing team collects detailed email-campaign data.

We use:

6 Input Variables (X): Email Marketing Metrics

1. **Emails_Sent** — total emails sent per day

2. **Open_Rate (%)** — how many opened the email

3. **Click_Through_Rate (%)** — link clicks

4. **Bounce_Rate (%)** — failed email deliveries

5. **Unsubscribe_Count** — number of users unsubscribing

6. **Promo_Code_Used (%)** — discount code usage from email

1 Output Variable (y)

✓ **Conversions (Daily New Customers from email)**

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Marketing Manager wants to know:

- Which email activities have the highest impact on conversions?

- Are discounts more effective than click-through rates?

- What happens if we increase email volume by 20%?

- Should we reduce bounce rate or promote more offers?

- What is the future expected conversion based on key email metrics?

Machine learning gives **evidence-backed decisions**, not guesses.

https://github.com/sanjeevlcc/notes_2081/blob/main/DM/MBA%20DMP/LAB_2.ipynb

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Decisions

✔ **Decision 1: Increase budget**
Because the model shows **higher spend → more customers** at a good cost.

✔ **Decision 2: Improve Email Click-Rate**
If CTR has the strongest positive impact, the decision is:
"Focus on better subject lines and call-to-actions."

✔ **Decision 3: Reduce Bounce Rate**
If bounce rate has a negative impact:
"Clean email list to improve delivery."

✔ **Decision 4: Promote Discount Codes**
If promo-code usage increases conversions:
"Send more promo emails during weekends."

✔ **Decision 5: Stop or Reduce Ineffective Strategy**
If a feature has **no impact**, decision:
"Do not spend more on that area."

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Variable relationship:

✅ `1` **One Input → One Output (Simple Relationship)**

Question:

"How does daily ad spend affect the number of new customers?"

Input (X):

- Ad_Spend (USD)

Output (y):

- New_Customers

Example:

If ad spend = $500 → customers = 20
If ad spend = $800 → customers = 32

✅ `2` **Multiple Inputs → One Output (Multiple Linear Regression)**

Question:

"How do email metrics influence total conversions?"

Inputs (X):

- Emails_Sent
- Open_Rate
- Click_Through_Rate
- Bounce_Rate
- Promo_Code_Used

Output (y):

- Conversions

Example:

More opens + more clicks + more promo code use → higher conversions

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✅ `3` **Multiple Inputs → Multiple Outputs (Multi-output Prediction)**

Question:

"How do marketing activities affect both sales *and* website sign-ups?"

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Inputs (X):

- Social_Ad_Spend
- Search_Ad_Spend
- Email_Campaigns

Outputs (Y):

- Daily_Sales
- New_Signups

Example:

Increasing all marketing channels may increase:

- Sales from 50 → 70
- Sign-ups from 100 → 150

🔥 **Ultra-short summary**

Relationship	Meaning	Example
1 input → 1 output	Simple effect	Ad spend → Customers
Many inputs → 1 output	Combined influence	Email metrics → Conversions
Many inputs → many outputs	Predict multiple outcomes	Marketing spend → Sales + Signups

Digital marketing tactic	
1. Social Media Marketing (Facebook Carousel Ads) **Input Variables (X):** • Ad Spend • Audience Targeting • Number of Impressions • Click-Through Rate **Target / Output (y):** • Sales • Brand Awareness (Reach)	**2. Content Marketing (Blogs, YouTube Videos)** **Input Variables (X):** • Number of Articles/Videos • SEO Keywords Used • Content Quality Score • Upload Frequency **Target / Output (y):** • Website Traffic • Engagement Time
3. Email Marketing (Discount Email / Newsletter) **Input Variables (X):** • Emails Sent • Open Rate • Click-Through Rate • Discount Offered **Target / Output (y):** • Conversions	**4. Pay-Per-Click (PPC Ads on Google)** **Input Variables (X):** • Bid Amount • Keywords Selected • Quality Score • Ad Position **Target / Output (y):** • Clicks

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• Revenue from Email	• Leads Generated
5. Interactive / Viral Campaigns (Barbie Selfie Generator) **Input Variables (X):** • Number of Shares • User Interactions • Campaign Reach **Target / Output (y):** • Viral Engagement • Brand Hype / Awareness	**7. Video Marketing (YouTube Targeted Ads)** **Input Variables (X):** • Video Views • Watch Time • Target Audience Selection • Ad Spend **Target / Output (y):** • Conversions • Lead Generation

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Module 1

Module 1: Advanced Digital Marketing Strategies (3 Hours)
This module will integrate digital marketing within the overall business strategy, supplemented by successful case studies, and gain a thorough understanding of how to define a target audience and buyer persona effectively through practical application of proven methods. **Lab Activity:** Develop a comprehensive digital marketing strategy for a hypothetical or real-world business, including SWOT analysis, target audience definition, and campaign objectives.

What does this module mean?

This module teaches you **how to make a digital marketing plan** for any business.

You will learn:

- Who your customers are
- What they want
- How to target them online
- How to design ads, emails, and content
- How to set goals
- How to check what is working

What do you actually DO in the lab?

You will:

1. Choose a business (real or imaginary)
2. Prepare **dummy/ real (like Kaggle , amazon dataset etc) marketing data**
3. Do **SWOT analysis**
4. Define **target audience**
5. Create **buyer persona**
6. Set **campaign objectives**

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📘 Hypothetical Scenario (Nepali Market)

Business Name: *"SastoBazar Online Kirana Delivery – Kathmandu & Lalitpur"*

Business Description (Easy Words)

SastoBazar is an online grocery delivery service providing:

- Daily vegetables
- Fruits
- Rice, dal, oil
- Milk & bakery items
- Household goods

Delivery areas: **Kathmandu, Lalitpur**
Target: **Busy families, office workers, students living in rooms**

NP 📊 **Dummy Data (10 Days – Nepali Digital Market)**

Day	Facebook Ad Spend (NPR)	Website Visits	Leads (Phone/Message)	Orders (New Customers)
1	1,000	450	30	6
2	1,500	600	38	8
3	2,000	750	45	10
4	2,500	900	52	12
5	3,000	1100	60	15
6	3,500	1300	68	17
7	4,000	1500	75	20
8	4,500	1800	82	23
9	5,000	2000	90	25
10	6,000	2400	105	30

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Insight:

- Ads increase → website visits go up

- Visits go up → message/call leads increase

- Leads increase → more grocery orders

NP 📌 **SWOT Analysis (Nepali Market Conditions)**

SWOT ANALYSIS

	Helpful to achieving the objective	Harmful to achieving the objective
Internal origin (attributes of the organization)	Strengths	Weaknesses
External origin (attributes of the environment)	Opportunities	Threats

Strengths (S):

- Fast delivery inside Ring Road

- Affordable pricing for low/middle income groups

- Trusted local items (fresh Tarkari, Nepali brands)

Weaknesses (W):

- Limited delivery to Bhaktapur

- No COD outside Ring Road

- Small warehouse → limited stock in peak hours

Opportunities (O):

- Growing demand for online grocery in Kathmandu

- Social media ads cheaper in Nepal

- Young consumers prefer mobile ordering

Threats (T):

- Competitors like BhatBhateni Online, Thulo.com

- Traffic, strikes, festival delays

- Payment gateway downtime

(DATA → PROCESS → RESULT → DECISION)

📊 1️⃣ **DATA (Given Dummy Data – Nepali Market)**

Day	Facebook Ad Spend (NPR)	Website Visits	Leads	Orders (New Customers)
1	1,000	450	30	6
2	1,500	600	38	8

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Day	Facebook Ad Spend (NPR)	Website Visits	Leads	Orders (New Customers)
3	2,000	750	45	10
4	2,500	900	52	12
5	3,000	1100	60	15
6	3,500	1300	68	17
7	4,000	1500	75	20
8	4,500	1800	82	23
9	5,000	2000	90	25
10	6,000	2400	105	30

Business Context:

Nepali online grocery service *SastoBazar* running Facebook ads to increase orders.

(DATA → PROCESS → RESULT → DECISION)

☆ 2 PROCESS (What We Analyze)

We look at the data through **SWOT components**, but using **numerical relationships**:

🟩 **Strengths — What is working well?**

➤ **PROCESS:**

Check correlation between:

- **Ad Spend ↑**
- **Website Visits ↑**
- **Orders ↑**

Calculate rough trend:

- Rs. 1,000 spend → 6 orders
- Rs. 6,000 spend → 30 orders

➤ **RESULT:**

Orders grow **5×** when spend grows **6×**.

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The business is **strong in digital ad performance**.

➤ **DECISION (Strength-Based):**

✓ Increase Facebook ad budget

✓ Push more ads on high-converting time slots

✓ Continue digital ads as a primary marketing channel

🟨 **Weaknesses — What is not working?**

➤ **PROCESS:**

Analyze conversion rate:

$$\text{Conversion Rate} = \frac{Orders}{Website\ Visits}$$

Example:
2400 visits → 30 orders = **1.25%**

This is **low** for ecommerce (ideal: 2–4%).

➤ **RESULT:**

High visits, but **low conversion**.
This shows weak landing page or checkout flow.

➤ **DECISION (Address Weakness):**

✓ Improve website UI/UX

✓ Add "Express Checkout"

✓ Display clear delivery areas

✓ Add Cash on Delivery option

🟦 **Opportunities — What can be improved using data?**

➤ **PROCESS:**

Observe rising trend in Nepal:

- Increasing online shopping

- Higher order volume from Facebook ads

- Kathmandu users prefer mobile ordering

Compare leads → orders conversion:

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- 105 leads $\rightarrow$ 30 orders
- Conversion = **28.5%**

This is **good**, showing potential for more marketing expansion.

➤ **RESULT:**

There is an opportunity to scale into:

- Evening delivery
- Subscription baskets
- Referral programs

➤ **DECISION (Exploit Opportunity):**

✓ Launch "Evening Express Delivery (5–8 PM)"
✓ Start "Monthly Subscription Basket"
✓ Run "Refer & Earn Rs. 50" program

🟥 **Threats — What risks does the data show?**

➤ **PROCESS:**

Compare ad spend vs orders:

- Cost per order (CPO) = Spend / Orders

- Example day 10:
  6000 / 30 = **Rs. 200 per order**

If CPO increases too much, profit margin decreases.

Also check competitors like:

- Bhatbhatenionline.com
- Daraz Mart
- Thulo.com

➤ **RESULT:**

Ad cost may increase due to competition.

Higher CPC and CPM may reduce profit.

➤ **DECISION (Mitigate Threat):**

✓ Diversify channels (TikTok ads, SEO, Email)
✓ Reduce reliance on Facebook ads
✓ Build own mobile app to cut ad costs

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Day	Facebook Ad Spend (NPR)	Website Visits	Leads	Orders (New Customers)
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7	4,000	1500	75	20
8	4,500	1800	82	23
9	5,000	2000	90	25
10	6,000	2400	105	30

RUN or LAB or Simulations:

https://github.com/sanjeevlcc/notes_2081/blob/main/DM/MBA%20DMP/LAB_3_SastoBazar_Online_Kirana_Delivery_%E2%80%93_Kathmandu_%26_Lalitpur_.ipynb

Assignments under excel:

https://github.com/sanjeevlcc/notes_2081/blob/main/DM/MBA%20DMP/LAB%203-%20%20SastoBazar%20Online%20Kirana%20Delivery%20%E2%80%93%20Kathmandu%20%26%20Lalitpur.xlsx

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🎯 Assignment Pack

Each domain includes:

- Scenario

- Dataset

- SWOT task

- Excel questions

- Forecast questions

- Decision-making questions

📌 DOMAIN 1: SastoBazar – Online Kirana Delivery (Kathmandu & Lalitpur)

(Same style as your earlier example)

Scenario

SastoBazar is an online grocery delivery service targeting busy office workers, families, and students in Kathmandu & Lalitpur. They run Facebook ads to generate website visits, leads, and daily orders.

Dataset (Enter into Excel)

Day	Ad Spend (NPR)	Website Visits	Leads	Orders
1	1000	450	30	6
2	1600	620	40	8
3	2200	760	50	11
4	3000	950	60	14
5	3800	1200	72	17
6	4200	1350	80	19
7	5000	1600	95	24

SWOT Assignment

Perform a SWOT analysis using ONLY the data.

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Excel Questions (No Answers Provided)

1. Formula Tasks

- Calculate Visit → Lead Conversion

- Calculate Lead → Order Conversion

- Calculate Cost Per Order

- Calculate Cost Per Lead

- Calculate overall Visit → Order Conversion

2. Visualization Tasks

- Create a Line Chart of Visits, Leads, and Orders

- Create a Scatter Plot of Ad Spend vs Orders

- Add a Trendline with Equation

3. Forecasting Tasks

- Forecast Orders for Day 10 using FORECAST.LINEAR

- Forecast Orders for Ad Spend = NPR 7000

4. Interpretation Questions

- Which day performed best?

- Which metric has strongest correlation with Orders?

- Is the conversion improving or declining?

📌 **DOMAIN 2: EduLearn Nepal – Online Course Enrollment Platform**

Scenario

EduLearn sells short online IT and business courses to students aged 18–35. Their primary marketing channels are Google Search Ads and Instagram promotions.

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Day	Google Ad Spend (NPR)	Clicks	Leads (Form Fills)	Enrollments
1	1800	140	25	5
2	2500	200	33	7
3	3000	240	40	8
4	3500	270	48	10
5	4200	320	55	12
6	4600	360	60	14
7	5000	395	70	16

SWOT Assignment

Create a SWOT table using Excel-derived insights.

Excel Questions

1. Formula Tasks

- Cost Per Click (CPC)
- Click → Lead Conversion
- Lead → Enrollment Conversion
- Cost Per Enrollment

2. Visualization Tasks

- Column chart: Daily Clicks
- Line chart: Leads & Enrollments trend
- Scatter plot: Ad Spend vs Enrollments

3. Forecasting Tasks

- Predict Enrollments for Day 10 using linear forecasting
- Predict Enrollments at ad spend of 6000 NPR

4. Interpretation Questions

- What pattern do you observe between clicks and enrollments?
- Which metric influences enrollments most strongly?
- Should EduLearn increase or reduce ad spending?

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📌 **DOMAIN 3: HimalFitness – Gym Membership & Personal Training Leads (Pokhara)**

Scenario

HimalFitness runs monthly promotions on Facebook & TikTok to attract new members and PT clients. The business wants to evaluate the effectiveness of their ads.

Dataset

Week	Ad Spend (NPR)	Reach	Leads (DM/Inquiries)	New Members
1	5000	8000	90	12
2	6000	9500	110	15
3	7000	11000	125	17
4	8500	13000	150	20
5	9000	14500	160	22

SWOT Assignment

Use numerical trends to build SWOT.

Excel Questions

1. Formula Tasks

- Reach → Lead Conversion
- Lead → Member Conversion
- Cost Per Lead
- Cost Per Member

2. Visualization Tasks

- Line chart: Reach & Leads
- Column chart: New Members
- Scatter plot: Ad Spend vs New Members

3. Forecasting Tasks

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- Predict New Members for Week 7
- Predict New Members at 10,000 NPR ad spend

4. Interpretation Questions

- Is the gym becoming more efficient in converting leads?

- Which week has the best ROI?

- Should HimalFitness invest more in ads?

📌 DOMAIN 4: YatriFoods – Online Momo Delivery (Kathmandu)

Scenario

YatriFoods delivers Momo orders across Kathmandu via Foodmandu & direct website orders. They want to evaluate their Instagram ad campaigns.

Dataset

Day	Instagram Ad Spend (NPR)	Website Visits	Cart Adds	Orders
1	800	300	40	18
2	1200	450	60	25
3	1500	520	70	30
4	1800	600	85	33
5	2200	750	100	40
6	2500	820	120	45
7	3000	900	135	50

SWOT Assignment

Build SWOT based on:

- Conversion trends

- Cost metrics

- Orders

- Cart Adds

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Excel Questions

1. Formula Tasks

- Visit → Cart Conversion

- Cart → Order Conversion

- Cost Per Order

- Average Order Value (if added later)

2. Visualization Tasks

- Line chart: Visits, Cart Adds, Orders

- Scatter plot: Ad Spend vs Orders

- Trendline + Equation

3. Forecasting Tasks

- Predict Orders for Day 10

- Predict Orders for Ad Spend = NPR 4000

4. Interpretation Questions

- What stage of the funnel is weakest?

- Is YatriFoods scaling efficiently?

- Should ads be increased, optimized, or redesigned?

🎓 **STUDENT SUBMISSION REQUIREMENTS**

Students must submit:

✔ **Excel File containing:**

- All formulas

- All charts

- Forecasting results

- SWOT table

- Summary dashboard (optional but recommended)

✔ **Short Report (1 page each domain):**

- Key findings

- Interpretation of charts

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- SWOT conclusion
- Recommended decisions

Module 2

Scenario 3

Scenario 4

Module 3

Scenario 3

Scenario 4

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Module 4

Scenario 3

Scenario 4