

Greetings from Matrix!!!

Matrix – The Tech and Analytics Club of IIM Trichy, in association with **Team Dhruva 2026**, presents its flagship analytics case competition “**6 DEGREES**”.

The case challenge gives participants an opportunity to demonstrate their analytical thinking, business acumen, and ability to translate data into **actionable business insights**. Participants are expected to work with a realistic, multi-table retail dataset and answer strategic questions faced by a fast-growing digital fashion brand.

Case Brief

Background

MATRIX, a fictitious women’s fashion brand, operates exclusively through E-commerce and Mobile App channels across multiple European countries. The brand offers a wide portfolio of apparel and accessories and actively runs promotional campaigns via Email, Social Media, Website Banners, and Mobile App notifications.

Operating in a highly competitive and promotion-driven digital fashion market, MATRIX leadership team is facing increasing pressure to:

- Improve campaign effectiveness
- Optimize pricing and discount strategies
- Balance inventory availability with demand
- Strengthen channel-wise performance
- Enhance customer engagement and profitability

As a member of the Strategic Analytics Team, your role is to analyse historical transactional, customer, product, campaign, and inventory data to support data-driven decision-making.

Dataset Overview

You are provided with **7 interconnected tables**, simulating real-world digital retail operations:

- **Customers:** Customer demographics and signup behaviour
- **Sales:** Order-level transactions
- **Sales Items:** Line-item level sales and discount details
- **Products:** Product attributes, pricing, and costs
- **Stock:** Country-level inventory positions
- **Campaigns:** Marketing campaigns with discount mechanics
- **Channels:** E-commerce and Mobile App

Business Objectives & Problem Statements

1. Channel & Campaign Effectiveness Analysis

MATRIX actively sells through E-commerce and Mobile App channels while running multiple marketing campaigns across Email, Social Media, Website Banners, and App notifications. However, leadership lacks clarity on how channels and campaigns interact to drive performance.

Your task is to:

- Compare E-commerce Vs Mobile App performance in terms of:
 - Revenue contribution
 - Order volume and average order value
 - Discount dependence
 - Evaluate the effectiveness of each campaign across channels.
 - High-impact campaigns that drive profitable growth
 - Campaigns that boost volume but erode margins.
 - Recommend how MATRIX should allocate marketing budgets across channels and campaign types going forward.
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2. Pricing & Discount Strategy Assessment

Discounting is a key driver in digital fashion but can significantly impact margins if misused.

Analyse:

- The impact of discounts on:
 - Item-level and order-level profitability
 - Customer purchase behaviour
 - Average order value
 - Evaluate whether discounts are being used to drive incremental demand or subsidize regular sales.
 - Recommend an optimized discount framework aligned with profitability goals.
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3. Product Portfolio Performance

Evaluate MATRIX's product assortment to:

- Identify best-selling vs underperforming products.
- Detect products with:
 - High revenue but low margins

- Low demand despite aggressive discounting
 - Recommend products to promote, reprice, bundle, or phase out.
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4. Inventory & Stock Risk Analysis

With country-level stock visibility, MATRIX aims to optimize inventory planning.

Your analysis should:

- Identify overstock and potential stock-out risks by country.
 - Highlight slow-moving SKUs contributing to holding costs.
 - Recommend inventory actions to reduce dead stock while minimizing lost sales.
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5. Customer Insights & Segmentation

Understand customer behaviour across regions and demographics.

Analyse customers by:

- Country
- Age range
- Signup cohorts
- Purchase value and discount sensitivity

Identify:

- High-value and repeat-prone segments
 - Price-sensitive customers
 - Segments suitable for targeted campaigns or app-first engagement
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6. Strategic Recommendations (Open-Ended)

Based on your end-to-end analysis:

- Propose **3–5 actionable strategic initiatives** for the next quarter.
 - Suggest how analytics can support near real-time decision-making.
 - Any additional insights, frameworks, or dashboards beyond the above will fetch brownie points.
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Participants are encouraged to think beyond descriptive analytics and present insights that balance growth, profitability, and operational efficiency.

Assumptions & Expectations

- Participants may make **reasonable business assumptions** where required.
 - Insights should be **data-backed and business-oriented**, not purely descriptive.
 - Dashboards, frameworks, and storytelling are highly encouraged.
 - You are not restricted to the above questions—creative and relevant analyses are welcome.
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As part of MATRIX's strategic leadership, your analysis will directly influence **pricing, campaigns, inventory planning, and channel strategy** in a competitive digital fashion landscape.

Think like a consultant. Analyse like a data scientist. Recommend like a business leader.