



Summer Sports Campaign

Canadian Tire wants to boost sales for its **Summer Sports Product Line** (e.g., bicycles, camping gear, and water sports equipment). The marketing team plans to send a promotional **email offering 15% off** to a selected group of customers.

Before launching the campaign broadly, they want to **test the effectiveness** of this email promotion on driving customer purchases and engagement.



Goals and Criteria

Goal	Success Criteria
Measure impact of the promotional email	Increased conversion or spending in the treatment group
Provide insights to support decision-making	Clear dashboard/report showing campaign effectiveness
Simulate realistic A/B test methodology	Accurate control/test group assignment and analysis
Build a data product for stakeholder use	Tableau dashboard with filters, trends, and KPIs

KPIs to Track

KPI	Definition
Conversion Rate	% of customers who made a purchase during the campaign period
Average Spend	Average spend per customer in each group
Total Revenue	Sum of all transactions during the test period
Revenue Lift	Revenue difference between Group B and Group A

User Stories

- As a marketing analyst, I want to compare sales performance between customers who received the promo and those who didn't so that I can assess the campaign's ROI.
 - As a business manager, I want a dashboard showing key trends across age, gender, and region so I can target future campaigns more effectively.
 - As a data analyst, I want to simulate a realistic A/B test and analyze it with SQL and Python so I can demonstrate my campaign analytics capabilities.
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Data Requirements

Table	Fields
customers	customer_id, age, gender, region, signup_date
campaigns	campaign_id, name, start_date, channel, discount_pct
campaign assignments	customer_id, campaign_id, group (A/B), email_sent_flag
transactions	transaction_id, customer_id, date, amount_spent, channel

Tools & Technologies

Layer	Tools Used
Data Simulation	Python (Faker, NumPy, Pandas)
Data Storage	PostgreSQL / SQLite
Data Analysis	SQL, Python (Pandas, SciPy)
Visualization	Tableau / Power BI
Reporting	Markdown, PowerPoint, Jupyter

Experiment Design

- Test to be conducted on a sample of 5,000+ customers.
- Control Group (A): Did not receive the email
- Treatment Group (B): Received the 15% off email
- Observation Window: June 1 to June 14
- Test Variables: Email exposure, customer segments
- Outcome Metrics: Spend, conversion, frequency of purchase