



# Slide Deck for Capstone Project #3

**First/Last Touch Attribution Analysis for CoolTshirts.com using SQL**

As part of 'Learn SQL from Scratch' course on [codecademy](#).

Prepared by TzeSheng 'tingling' Yeo

Class of : May 29 2018 – Jul 24 2018



# Table of Contents

1. CoolTshirts.com Overview
2. Typical User Journey
3. Suggested Campaign Budget



# Section 1

CoolTshirts.com

Overview

# 1.0 Overview of Data

- The data available is made up of 5 columns, with 5,692 rows of data. The first 10 lines and the database schema are displayed to the right.

Query Results				
page_name	timestamp	user_id	utm_campaign	utm_source
1 - landing_page	2018-01-24 03:12:16	10006	getting-to-know-cool-tshirts	nytimes
2 - shopping_cart	2018-01-24 04:04:16	10006	getting-to-know-cool-tshirts	nytimes
3 - checkout	2018-01-25 23:10:16	10006	weekly-newsletter	email
1 - landing_page	2018-01-25 20:32:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed
2 - shopping_cart	2018-01-25 23:05:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed
3 - checkout	2018-01-28 13:26:02	10030	retargetting-campaign	email
4 - purchase	2018-01-28 13:38:02	10030	retargetting-campaign	email
1 - landing_page	2018-01-05 18:31:17	10045	getting-to-know-cool-tshirts	nytimes
2 - shopping_cart	2018-01-05 21:16:17	10045	getting-to-know-cool-tshirts	nytimes
3 - checkout	2018-01-09 03:05:17	10045	retargetting-ad	facebook

Database Schema	
page_visits 5692 rows	
page_name	TEXT
timestamp	TEXT
user_id	INTEGER
utm_campaign	TEXT
utm_source	TEXT



# Result 1.1

There were 8 distinct campaigns used by CoolTshirts.com

# of campaigns
8

Meanwhile, a total of 6 sources were used by the company.

# of sources
6

# Result 1.2

Query Results	
utm_campaign	utm_source
cool-tshirts-search	google
getting-to-know-cool-tshirts	nytimes
interview-with-cool-tshirts-founder	medium
paid-search	google
retargetting-ad	facebook
retargetting-campaign	email
ten-crazy-cool-tshirts-facts	buzzfeed
weekly-newsletter	email

As per the table on the left, 'email' and 'google' were each used in 2 campaigns, while the other sources were used in only 1 campaign each.

# Result 1.3

- CoolTshirts.com has 4 pages, namely
  - the landing page,
  - the shopping cart,
  - the checkout,
  - and a purchase confirmation page.
- The pages are respectively numbered 1 to 4 in the database.

Query Results
page_name
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase



# Section 2

## Typical User Journey



# Result 2.1

- The “interview with cool tshirts founder” campaign is attributed the most first-touches, bringing the most first-time visitors to the website with a count of 622 users.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

# Result 2.1

- This is followed closely by the “getting to know cool tshirts” and “ten crazy cool tshirts facts” campaigns with each 612 and 576 attributes respectively.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

# Result 2.1

- Aside from the “cool tshirts search” campaign with 169 first-time users attributed, the other campaigns did not bring in any first time users.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

# Result 2.2

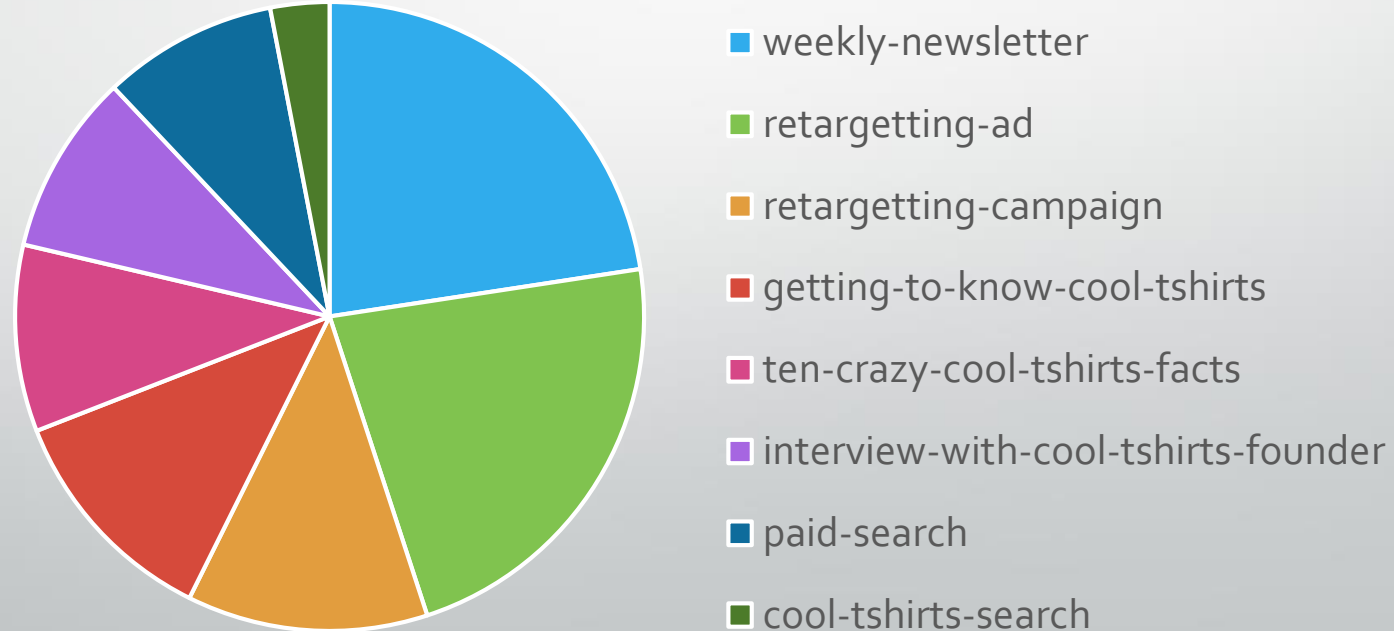
- As for last-touches, the “weekly newsletter” and “retargetting ad” campaigns both have the highest last-touches attributed to them.

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	447
retargetting-ad	443
retargetting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184
paid-search	178
cool-tshirts-search	60

# Result 2.2

- Overall, the last touch attribute is fairly well-distributed across all campaigns.

Last touch attribute



# Result 2.3

- In total, 361 unique users completed the checkout process and reached the 'purchase' page on the website, representing 18.24% of the 1,979 total unique users in the data.

Query Results		
totalpurc	totaluser	%
361	1979	18.24

# Result 2.4

- Similar to Result 2.2, the “weekly newsletter” and “retargetting ad” campaigns both have the highest last-touches on the purchase page attributed to them.

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	114
retargetting-ad	112
retargetting-campaign	53
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

# Result 2.5

- However, the total last-touches attributed to a campaign name in this table is 358, which is 3 touches lesser than the 361 total calculated in section 2.3.

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	114
retargeting-ad	112
retargeting-campaign	53
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

Query Results
# of purchases
361



# Result 2.5

- Upon further inspection, some rows were lost because users 29180, 76466, and 94852 have a “last-touch-at” timestamp that is later than the timestamp at page 4. These users had revisited the site after purchase, leaving a new last-touch-at timestamp.

Query Results		
User ID	Time visited page 4	Last touch at
29180	2018-01-12 16:36:41	2018-01-28 13:45:24
76466	2018-01-10 15:39:09	2018-01-12 22:08:05
94852	2018-01-13 09:07:45	2018-01-27 07:19:09

# Result 2.6

- To be sure, the journey of these 3 users is displayed below.
- Of the 361 users in the database who purchased from CoolTshirts.com, only these 3 users who revisited the website after purchase, and all 3 stopped their 2<sup>nd</sup> visits at the shopping cart.

Query Results		
User ID	Timestamp	Page Name
29180	2018-01-10 00:29:41	1 - landing_page
29180	2018-01-10 02:43:41	2 - shopping_cart
29180	2018-01-12 16:22:41	3 - checkout
29180	2018-01-12 16:36:41	4 - purchase
29180	2018-01-28 13:20:24	1 - landing_page
29180	2018-01-28 13:45:24	2 - shopping_cart

76466	2018-01-09 01:33:09	1 - landing_page
76466	2018-01-09 06:28:09	2 - shopping_cart
76466	2018-01-10 15:35:09	3 - checkout
76466	2018-01-10 15:39:09	4 - purchase
76466	2018-01-12 22:02:05	1 - landing_page
76466	2018-01-12 22:08:05	2 - shopping_cart

94852	2018-01-09 02:41:45	1 - landing_page
94852	2018-01-09 03:10:45	2 - shopping_cart
94852	2018-01-13 08:57:45	3 - checkout
94852	2018-01-13 09:07:45	4 - purchase
94852	2018-01-27 02:35:09	1 - landing_page
94852	2018-01-27 07:19:09	2 - shopping_cart

# Result 2.6

- A review of a returning customer's experience in the website, particularly at the shopping cart page, could be warranted.

Query Results		
User ID	Timestamp	Page Name
29180	2018-01-10 00:29:41	1 - landing_page
29180	2018-01-10 02:43:41	2 - shopping_cart
29180	2018-01-12 16:22:41	3 - checkout
29180	2018-01-12 16:36:41	4 - purchase
29180	2018-01-28 13:20:24	1 - landing_page
29180	2018-01-28 13:45:24	2 - shopping_cart

76466	2018-01-09 01:33:09	1 - landing_page
76466	2018-01-09 06:28:09	2 - shopping_cart
76466	2018-01-10 15:35:09	3 - checkout
76466	2018-01-10 15:39:09	4 - purchase
76466	2018-01-12 22:02:05	1 - landing_page
76466	2018-01-12 22:08:05	2 - shopping_cart
94852	2018-01-09 02:41:45	1 - landing_page
94852	2018-01-09 03:10:45	2 - shopping_cart
94852	2018-01-13 08:57:45	3 - checkout
94852	2018-01-13 09:07:45	4 - purchase
94852	2018-01-27 02:35:09	1 - landing_page
94852	2018-01-27 07:19:09	2 - shopping_cart

# Result 2.6

- A funnel analysis, outside the scope of this presentation, could reveal further insights on how the typical user uses the website and its pages.

Query Results		
User ID	Timestamp	Page Name
29180	2018-01-10 00:29:41	1 - landing_page
29180	2018-01-10 02:43:41	2 - shopping_cart
29180	2018-01-12 16:22:41	3 - checkout
29180	2018-01-12 16:36:41	4 - purchase
29180	2018-01-28 13:20:24	1 - landing_page
29180	2018-01-28 13:45:24	2 - shopping_cart

76466	2018-01-09 01:33:09	1 - landing_page
76466	2018-01-09 06:28:09	2 - shopping_cart
76466	2018-01-10 15:35:09	3 - checkout
76466	2018-01-10 15:39:09	4 - purchase
76466	2018-01-12 22:02:05	1 - landing_page
76466	2018-01-12 22:08:05	2 - shopping_cart
94852	2018-01-09 02:41:45	1 - landing_page
94852	2018-01-09 03:10:45	2 - shopping_cart
94852	2018-01-13 08:57:45	3 - checkout
94852	2018-01-13 09:07:45	4 - purchase
94852	2018-01-27 02:35:09	1 - landing_page
94852	2018-01-27 07:19:09	2 - shopping_cart

# Result 2.7

- Also, of interest to note is that the typical user arrives at CoolTshirts.com's website through more than one campaign.
- An extract of the data shows that campaigns responsible for first-touches are often not the same as those attributed for last-touches.

Query Results		
User ID	First touch campaign	Last touch ca
10006	getting-to-know-cool-tshirts	weekly-new
10030	ten-crazy-cool-tshirts-facts	retargetting-ci
10045	getting-to-know-cool-tshirts	retargettin
10048	interview-with-cool-tshirts-founder	retargetting-ci
10069	ten-crazy-cool-tshirts-facts	retargettin
10162	getting-to-know-cool-tshirts	weekly-new
10177	getting-to-know-cool-tshirts	getting-to-know-
10254	interview-with-cool-tshirts-founder	paid-sea
10329	interview-with-cool-tshirts-founder	retargetting-ci
10354	getting-to-know-cool-tshirts	paid-sea
10400	ten-crazy-cool-tshirts-facts	retargetting-ci
10503	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10656	interview-with-cool-tshirts-founder	retargetting-ci
10677	interview-with-cool-tshirts-founder	interview-with-cool-
10734	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10875	ten-crazy-cool-tshirts-facts	weekly-new
10877	interview-with-cool-tshirts-founder	paid-sea
10925	cool-tshirts-search	cool-tshirts-
10957	ten-crazy-cool-tshirts-facts	ten-cra
10960	ten-crazy-cool-tshirts-facts	ret



# Result 2.8

- In fact, the data shows that 1,367 users returned to the website on a different campaign than the one they first used to reach the website.

Query Results	
	Total
	1367

Query Results		
User ID	First touch campaign	Last touch ca
10006	getting-to-know-cool-tshirts	weekly-new
10030	ten-crazy-cool-tshirts-facts	retargetting-ci
10045	getting-to-know-cool-tshirts	retargettin
10048	interview-with-cool-tshirts-founder	retargetting-ci
10069	ten-crazy-cool-tshirts-facts	retargettin
10162	getting-to-know-cool-tshirts	weekly-new
10177	getting-to-know-cool-tshirts	getting-to-know-
10254	interview-with-cool-tshirts-founder	paid-sea
10329	interview-with-cool-tshirts-founder	retargetting-ci
10354	getting-to-know-cool-tshirts	paid-sea
10400	ten-crazy-cool-tshirts-facts	retargetting-ci
10503	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10656	interview-with-cool-tshirts-founder	retargetting-ci
10677	interview-with-cool-tshirts-founder	interview-with-cool-
10734	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10875	ten-crazy-cool-tshirts-facts	weekly-new
10877	interview-with-cool-tshirts-founder	paid-sea
10925	cool-tshirts-search	cool-tshirts-
10957	ten-crazy-cool-tshirts-facts	ten-cra
10960	ten-crazy-cool-tshirts-facts	ret



# Result 2.8

- This suggests that CoolTshirts.com shouldn't solely rely on just a single ad campaign.
- Instead, their strategy will be stronger by combining multiple campaigns.

Query Results	
	Total
	1367

Query Results		
User ID	First touch campaign	Last touch ca
10006	getting-to-know-cool-tshirts	weekly-new
10030	ten-crazy-cool-tshirts-facts	retargetting-ci
10045	getting-to-know-cool-tshirts	retargettin
10048	interview-with-cool-tshirts-founder	retargetting-ci
10069	ten-crazy-cool-tshirts-facts	retargettin
10162	getting-to-know-cool-tshirts	weekly-new
10177	getting-to-know-cool-tshirts	getting-to-know-
10254	interview-with-cool-tshirts-founder	paid-sea
10329	interview-with-cool-tshirts-founder	retargetting-ci
10354	getting-to-know-cool-tshirts	paid-sea
10400	ten-crazy-cool-tshirts-facts	retargetting-ci
10503	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10656	interview-with-cool-tshirts-founder	retargetting-ci
10677	interview-with-cool-tshirts-founder	interview-with-cool-
10734	ten-crazy-cool-tshirts-facts	ten-crazy-cool-ts
10875	ten-crazy-cool-tshirts-facts	weekly-new
10877	interview-with-cool-tshirts-founder	paid-sea
10925	cool-tshirts-search	cool-tshirts-
10957	ten-crazy-cool-tshirts-facts	ten-cra
10960	ten-crazy-cool-tshirts-facts	ret





# Section 3

Suggested Campaign  
Budget



# Result 3.1

- Combining results 2.1 and 2.2, it appears that CoolTshirts.com should focus their efforts on campaigns with the highest first/last touch attributions.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	447
retargeting-ad	443
retargeting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184

# Result 3.1

- Campaigns carrying content that engages audiences, such as the founder interview, the NY Times article to introduce CoolTshirts, or facts about CoolTshirts, appear to draw in the most first-time users.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	447
retargeting-ad	443
retargeting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184

# Result 3.1

- On the other hand, the weekly newsletter and retargeting ad should be in the campaign budget as well.
- They can be launched after the first 3 campaigns, to bring customers back to the website and complete their purchases.

Query Results	
Campaign Name	First-touch attributes
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

Query Results	
Campaign Name	Last-touch attributes
weekly-newsletter	447
retargeting-ad	443
retargeting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184



# Summary

# Summary

- CoolTshirts.com should launch content-rich campaigns, such as interviews and news articles on the company to draw in first-time customers.
- Then follow this up with newsletters emailed to subscribers and retargeting ads on social media to draw customers back and complete their purchases at the website.