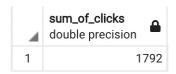


## Loading the Data in SQL

- SQL Query:
- Creating store\_revenue table from CSV create table store revenue (date date, brand id int, store\_location varchar(250), revenue float);
- COPY store\_revenue
  FROM
  '/Users/rohan/Downloads/store\_revenue.csv'
  DELIMITER ','
  CSV HEADER;
- · Creating marketing data table from CSV
- create table marketing data ( date date, geo varchar(2), impressions float, clicks float);
- COPY marketing\_data FROM '/Users/rohan/Downloads/marketing\_data.csv' DELIMITER ',' CSV HEADER;









select sum(m.clicks) from
marketing\_data m;









select s.store\_location, sum(s.revenue)
as revenue from store\_revenue s group
by s.store\_location order by 2 desc;

4	store_location character varying (250)	revenue double precision
1	United States-CA	235237
2	United States-NY	51984
3	United States-TX	9629
3		0170



4	date 🛕	substring at text	impressions double precision	clicks double precision	double precision
1	2016-01-01	TX	2532	45	654
2	2016-01-01	CA	3425	63	334
3	2016-01-01	NY	3532	25	284
4	2016-01-01	MN	1342	784	[null
5	2016-01-02	CA	1354	53	465
6	2016-01-02	NY	4643	85	2574
7	2016-01-02	MN	2366	85	[nul
8	2016-01-02	TX	3643	23	576
9	2016-01-03	TX	2353	57	423
10	2016-01-03	MN	5783	87	[null
11	2016-01-03	NY	4735	63	347
12	2016-01-03	CA	5258	36	23433
13	2016-01-04	MN	9345	24	[null
14	2016-01-04	NY	4754	36	4528
15	2016-01-04	TX	5783	47	235
16	2016-01-04	CA	7854	85	3
17	2016-01-05	TX	2535	63	42
18	2016-01-05	MN	3452	25	[nul
19	2016-01-05	NY	2364	33	350
20	2016-01-05	CA	4678	73	61
21	2016-01-06	TX	[null]	[null]	

• SQL Query: select distinct s.date, SUBSTRING(s.store location, 15), AVG (m.impressīons)::float as impressions, AVG(m.clicks)::float as
clicks, SUM(s.revenue) as revenue from store revenue s left outer join marketing data m on m.date = s.date and  $m.\overline{q}eo$  = SUBSTRING(s.store location, 15) group by s.store location, s.date UNION select distinct m.date, m.geo, AVG (m.impressions)::float as impressions, AVG(m.clicks)::float as clicks, SUM(s.revenue) as revenue from store revenue s
right outer join marketing data m on  $\overline{m}$ .date =  $\overline{s}$ .date and  $\overline{m}$ . $\overline{geo}$  = SUBSTRING(s.store location, 15) group by

m.geo, m.date order by 1;



4	geo character varying (2)	revenue_per_click_through_double precision	click_through_rate double precision
1	CA	17126012.42903226	0.013735655102131242
2	NY	4302213.024793388	0.012083083682844019
3	TX	690040.8340425532	0.0139498990858364

Best Performing Store is California Store with best Click Through Rate is Texas

## Metric Used to Evaluate:

Click through rate proportional to Revenue Conversion rate of clicks proportional to Revenue Assuming product costs common for all stores Thus,

CTR\*Conv. Rate \* Cost ~ Revenue Conv. Rate ~ Revenue/CTR

• SQL Query:

with click revenue as ( select distinct m.date, m.geo, AVG(m.impressions)::float as impressions, AVG(m.clicks)::float as clicks, SUM(s.revenue) as revenue from store revenue s join marketing data m on  $m.date = s.\overline{d}ate$  and m.geo =SUBSTRING(s.store location, 15) group by m.geo, m.date) select c.geo, SUM(c.revenue)/(SUM(c.clicks)/SUM(c.imp ressions)) as revenue per click through, SUM(c.clicks)/SUM(c.impressions) as click through rate from click revenue c group by c.geo order by 2 desc;



4	states text	revenue double precision
1	CA	235237
2	NY	51984
3	TX	9629

## • SQL Query:

select SUBSTRING(s.store\_location,15)
as states, SUM(s.revenue)::float as
revenue from store\_revenue s
group by s.store\_location order by 2
desc limit 10;

