


MegaMetrix Mart

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Purpose of the Project

- Data analytics solution for business
- Optimize business operations
- Analyze the data of organization
- Sales and marketing insights

Current Marketing and Analysis Domain

Current System

- Customer relationship management (CRM) software
- Email marketing platforms, and social media advertising platforms
- Different tools and technology

Weaknesses of the Current System

- Lack of integration among tools
- Analysis capabilities
- Limited insights

Tools and Technology of Proposed system



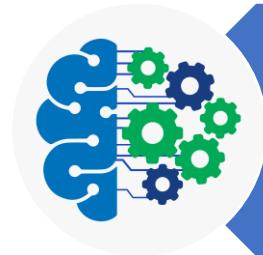
Tableau



Python



Excel

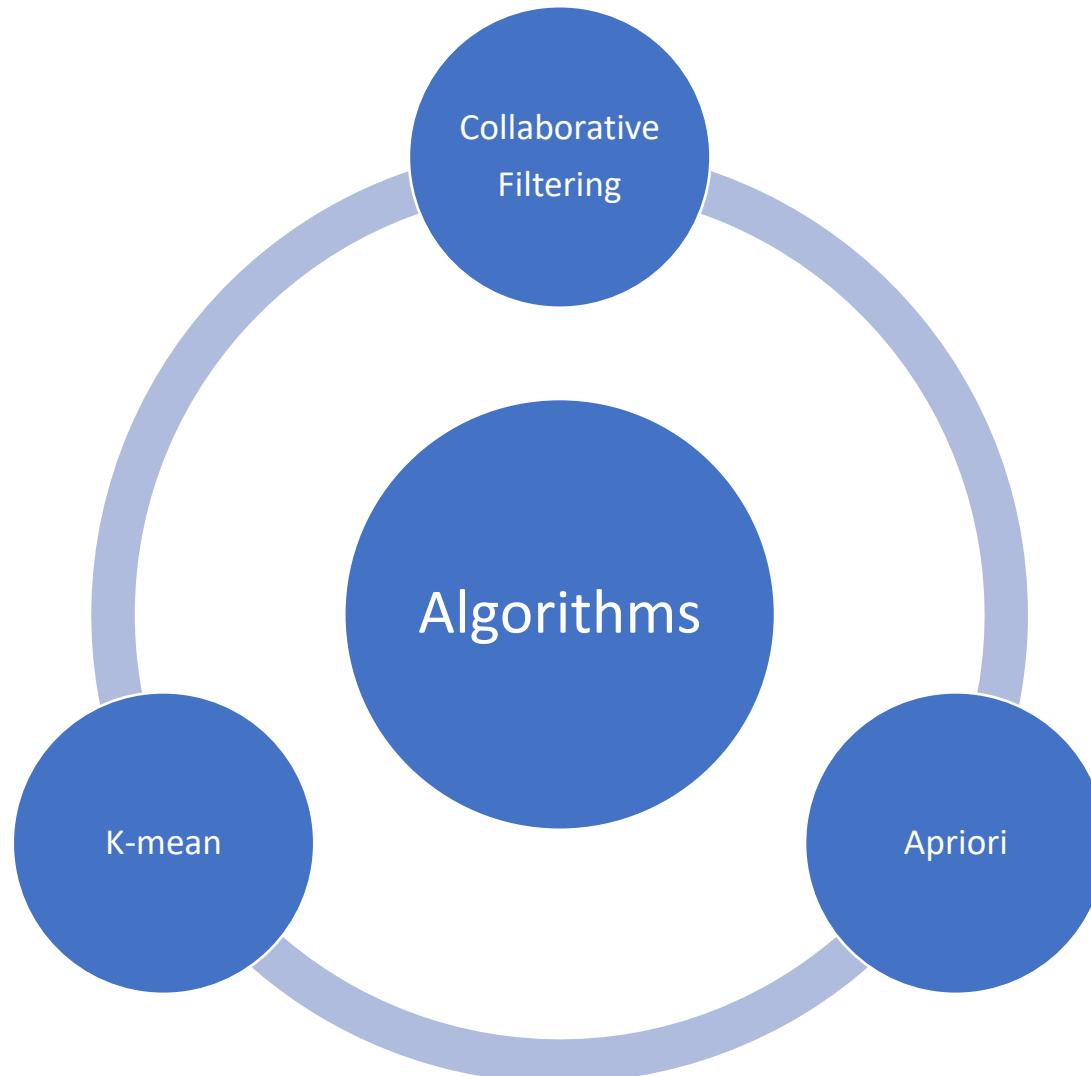


Algorithm

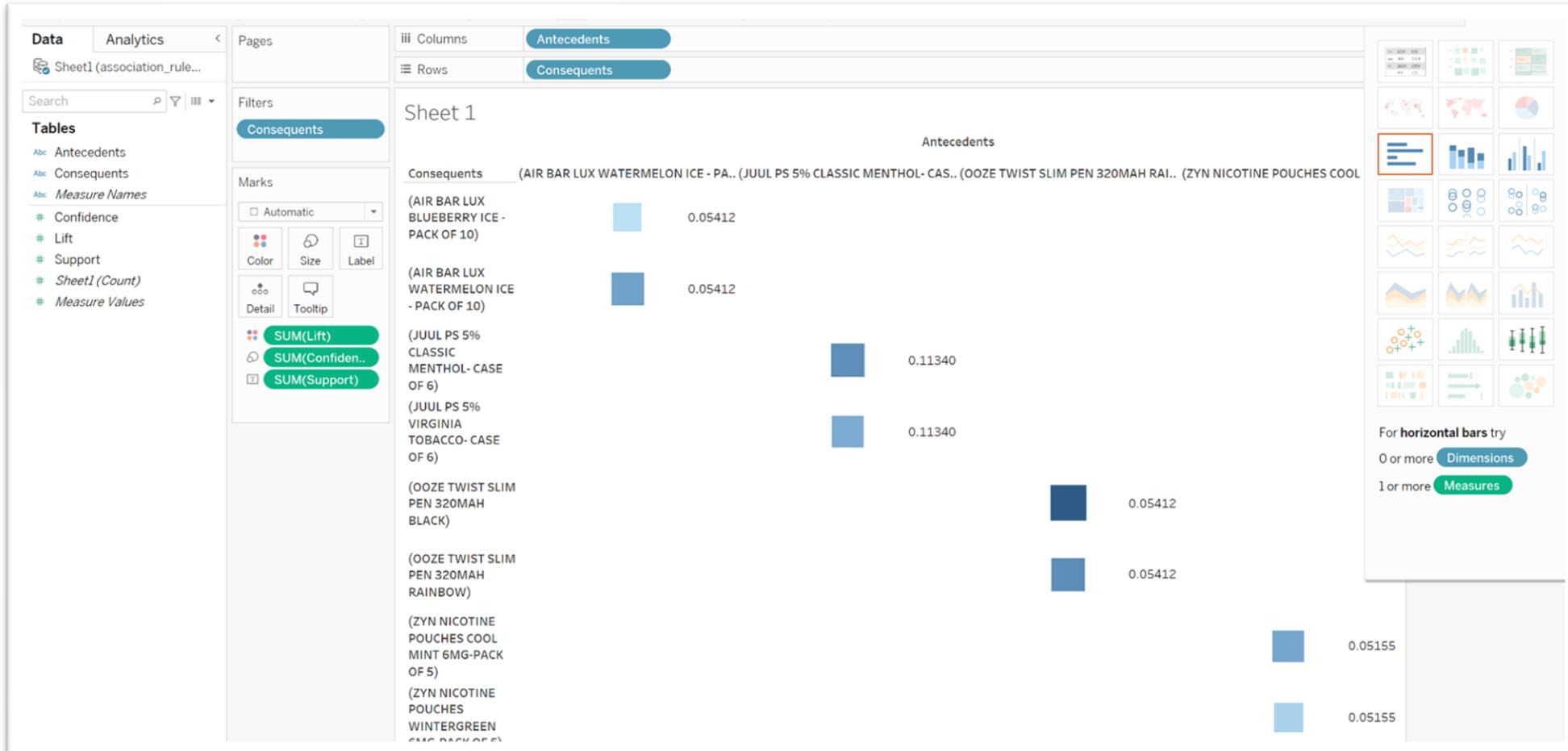


MySQL

System Design



Visualization using Tableau



Money-Centric View

- Identifying High-Value Customers
- Targeting High-Value Customers with Personalized Campaigns

	A	B	C	D	E	F	G	H
1		customer			Cluster no.	money-centric view		
2	customer_id	email	mobile	whatsapp	cluster	total_spent	total_days_buy	spend_per_day
4	6599	110HLOUNGE@GMAIL.COM	(508) 904-8250	(508) 904-8250	Cluster 4	53719.13	13	4132.240769
9	6608	-	(914) 673-1121	(914) 673-1121	Cluster 4	52325.78	24	2180.240833
14	6616	TUSHAR9722@GMAIL.COM	(718) 340-9282	(718) 340-9282	Cluster 1	42855.22	13	3296.555385
17	6623	-	(212) 447-0131	(212) 447-0131	Cluster 0	51434.9	49	1049.691837
21	6632	315SIGMA@GMAIL.COM	(516) 371-6213	(516) 371-6213	Cluster 1	45902.24	57	805.3024561
23	6637	360DELINYC@GMAIL.COM	(443) 515-7879	(443) 515-7879	Cluster 6	68772.21	16	4298.263125
24	6640	-	(212) 661-9141	-	Cluster 0	30874.25	35	882.1214286
25	6641	MUNAWAR_2042@YAHOO.COM	(347) 613-8864	(347) 613-8864	Cluster 3	42303.14	8	5287.8925
26	6643	162SMOKESHOP@GMAIL.COM	(647) 247-1473	(647) 247-1473	Cluster 6	277987.14	46	6043.198696
30	6648	-	(718) 200-3092	(718) 200-3092	Cluster 6	39128.89	28	1397.460357
32	6652	moekabir84@gmail.com	(917) 634-4779	-	Cluster 5	56615.52	29	1952.25931
38	6665	ABDOYAHYA143@GMAIL.COM	(347) 285-4075	(347) 285-4075	Cluster 4	76610.4	20	3830.52
43	6680	-	(908) 230-3513	(908) 230-3513	Cluster 2	45373.06	10	4537.306
44	6681	nutansls@gmail.com	(908) 230-3513	-	Cluster 0	81996.68	22	3727.121818
51	6696	SUBJANALI@YAHOO.COM	(917) 463-9338	(917) 463-9338	Cluster 1	80311.6	23	3491.808696
54	6701	JUNAIDBINMAHFOOZ@GMAIL.COM	(347) 925-4492	(347) 925-4492	Cluster 1	109003.44	16	6812.715
57	6707	NOMAIL1252@GMAIL.COM	(347) 653-4647	(347) 653-4647	Cluster 6	32949.95	19	1734.207895
60	6718	JAGRUTI444@YAHOO.COM	(603) 880-7655	(603) 880-7655	Cluster 6	148845.65	14	10631.83214
61	6719	ADNANKASSIM@YAHOO.COM	(718) 381-2220	(718) 381-2220	Cluster 4	35068.47	17	2062.851176

Repetitive Customers Patterns

- Identifying Customers with High Repeat Purchases
- Targeting Repetitive Customers with Relevant Promotions

	F	G	H	I	J	K
1	money-centric view			repetition		
2	total_spent	total_days_buy	spend_per_day	repeat_day	count	repeat_rate
4	53719.13	13	4132.240769	9	19	61.29032258
9	52325.78	24	2180.240833	8	24	64.86486486
14	42855.22	13	3296.555385	17	11	61.11111111
17	51434.9	49	1049.691837	5	35	54.6875
21	45902.24	57	805.3024561	2	77	69.36936937
23	68772.21	16	4298.263125	4	15	62.5
24	30874.25	35	882.1214286	9	18	48.64864865
25	42303.14	8	5287.8925	16	12	66.66666667
26	277987.14	46	6043.198696	4	36	52.17391304
30	39128.89	28	1397.460357	9	17	51.51515152
32	56615.52	29	1952.25931	6	27	57.44680851
38	76610.4	20	3830.52	8	25	64.1025641
43	45373.06	10	4537.306	26	6	50
44	81996.68	22	3727.121818	12	13	54.16666667
51	80311.6	23	3491.808696	9	18	52.94117647
54	109003.44	16	6812.715	11	16	64
57	32949.95	19	1734.207895	14	16	69.56521739
60	148845.65	14	10631.83214	11	17	62.96296296
61	35068.47	17	2062.851176	12	15	55.55555556

Recommendation

- Generating Product Recommendations for Customers
 - Creating Bundles of Frequently Recommended Products

Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
recommendation using collaborative filtering																		
2	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda	nmenda
4	HAND PIP	SMOKE AC	BUTANE + GENERAL	ADULT PIL GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	E-CIGARET	MINI TOR	MEDICINE NICOTINE	TRAYS	HHC	HOOKAH	DETOX + S E-LIQUID	GLASS CLE					
9	HAND PIP	INCENSE + SMOKE AC	GENERAL	ADULT PIL GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE NICOTINE	TRAYS	HOOKAH	E-LIQUID	DETOX + S HKTB	GLASS CLE					
14	SMOKE AC	GENERAL	ADULT PIL GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	E-CIGARET	MINI TOR	MEDICINE NICOTINE	HHC	TRAYS	BRANDED	DETOX + S E-LIQUID	HOOKAH	(SALT E-LIC E-LIQUID					
17	ADULT PIL GRINDERS	BUTANE + JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	SALT E-LIC	GLASS CLE	SCALES	E-LIQUID				
21	INCENSE + SMOKE AC	GENERAL	ADULT PIL GRINDERS	BUTANE + JARS/SEAL GLASS PIPIGLASS ACC	DRY + WA	MEDICINE	HHC	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	GLASS CLE	SALT E-LIC	E-LIQUID				
23	SMOKE AC	GENERAL	I BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	MEDICINE NICOTINE	HHC	BRANDED	HOOKAH	(DETOX + S E-LIQUID	HKTB	GLASS CLE	SALT E-LIC	E-LIQUID				
24	SMOKE AC	ADULT PIL BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	SALT E-LIC	GLASS CLE	SCALES	E-LIQUID				
25	SMOKE AC	GENERAL	I BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE	HHC	TRAYS	BRANDED	HOOKAH	(HKTB	E-LIQUID	GLASS CLE	SALT E-LIC	SCALES		
26	SMOKE AC	GENERAL	I BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S E-LIQUID	HKTB	SALT E-LIC				
30	SMOKE AC	GENERAL	I BUTANE + GRINDERS	JARS/SEAL GLASS PIPI MINI TOR	GLASS ACC	DRY + WA	NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	(GLASS CLE	SCALES			
32	SMOKE AC	GENERAL	ADULT PIL BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE	HHC	HOOKAH	(DETOX + S E-LIQUID	HKTB	GLASS CLE	SALT E-LIC	E-LIQUID				
38	GENERAL	I BUTANE + ADULT PIL GRINDERS	JARS/SEAL GLASS PIPI MINI TOR	GLASS ACC	DRY + WA	MEDICINE NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(E-LIQUID	HKTB	DETOX + S SALT	E-LIC				
43	SMOKE AC	GENERAL	ADULT PIL BUTANE + GRINDERS	JARS/SEAL GLASS PIPI E-CIGARET	GLASS ACC	MINI TOR	MEDICINE DRY + WA	NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(HKTB	E-LIQUID				
44	GENERAL	ADULT PIL BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MEDICINE NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	GLASS CLE	SALT E-LIC	E-LIQUID					
51	INCENSE + SMOKE AC	GENERAL	I GRINDERS	BUTANE + JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE NICOTINE	HHC	BRANDED	DETOX + S E-LIQUID	SALT E-LIC	GLASS CLE	SCALES					
54	GENERAL	ADULT PIL BUTANE + GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	MEDICINE DRY + WA	NICOTINE	HHC	TRAYS	BRANDED	HOOKAH	(E-LIQUID	DETOX + S HKTB	SALT E-LIC					
57	GENERAL	I GRINDERS	BUTANE + JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	HHC	TRAYS	BRANDED	HOOKAH	(DETOX + S HKTB	E-LIQUID	GLASS CLE	SALT E-LIC	SCALES	E-LIQUID			
60	SMOKE AC	GENERAL	ADULT PIL GRINDERS	JARS/SEAL GLASS PIPIGLASS ACC	MINI TOR	DRY + WA	MEDICINE	TRAYS	BRANDED	HOOKAH	(DETOX + S E-LIQUID	HKTB	GLASS CLE	E-LIQUID	(SCALES			
61	HAND PIP	INCENSE + SMOKE AC	GENERAL	ADULT PIL GRINDERS	JARS/SEAL GLASS PIPI MINI TOR	(GLASS ACC	DRY + WA	MEDICINE NICOTINE	HHC	HOOKAH	(E-LIQUID	DETOX + S HKTB	SALT E-LIC					

Favorite

- Analyzing Customer Favorites for Product Insights

	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
Favorites																			
2	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite	Favorite
4	HKTB	SALT E-LIC ZIPPO LIG E-LIQUID (GLASS ACC GRINDERS DELTA 8 / TRAYS	E-LIQUID NICOTINE BUTANE + E-CIGARET CBD EDIBL BIG TORCH INCENSE + GLASS CLE CIGAR	LIGHTERS KRATOM															
9	DELTA 8 / BRANDED CBD EDIBL ADULT PIL GRINDERS 510 THRE/JARS/SEAL TRAYS	BUTANE + SMOKE AC GLASS ACC HHC	GENERAL I LIGHTERS E-LIQUID I GLASS CLE SALT E-LIC HOOKAH (HOOKAHS																
14	ADULT PIL GLASS CLE HAND PIP E-INCENSE + DISPOSAB DELTA 8 / JARS/SEAL PHONE AC BUTANE + ZIPPO LIG GLASS ACC ROLLING PE-CIGARET E-LIQUID FLIGHTERS MINI TOR THCO	GENERAL I BIG TOR																	
17	E-CIGARET E-INCENSE + MEDICINE DELTA 8 / GENERAL I LIGHTERS																		
21	ROLLING P510 THRE/E-LIQUID (DRY + WA) INCENSE + SALT E-LIC E-CIGARET THCO	E-LIQUID KRATOM E-CIGARET JARS/SEAL PHONE CA NICOTINE E-LIQUID / MEDICINE CBD FLOW PHONE AC TRAYS																	
23	GRINDERS DRY + WA) INCENSE + E-CIGARET DELTA 8 / LIGHTERS CBD	TRAYS	PHONE AC SMOKE AC ADULT PIL MEDICINE HAND PIP E-CIGARET E-CIGARET GENERAL I CBD TOPIC CBD FLOW BUTANE +																
24	ROLLING PE-CIGARET GENERAL I LIGHTERS																		
25	ROLLING P PHONE AC GRINDERS MEDICINE INCENSE + GENERAL I DELTA 8 / KRATOM DRY + WA) E-CIGARET GLASS CLE WHIP CRE. HHC	LIGHTERS TRAYS WHIP CRE. HAND PIP BUTANE + SMOKE AC																	
26	E-CIGARET DELTA 8 / WHIP CRE. KRATOM INCENSE + LIGHTERS ZIPPO LIG ADULT PIL WHIP CRE. MEDICINE GENERAL I HHC	HKTB	HAND PIP SMOKE AC DETOX + S E-CIGARET BUTANE + GLASS CLE																
30	DELTA 8 / SALT E-LIC KRATOM HHC	PHONE CA E-LIQUID I ROLLING PE-CIGARET THCO	LIGHTERS MEDICINE ADULT PIL THCP	GENERAL I DELTA 8 / BIG TORCH SMOKE ACCESSORIES															
32	GENERAL I ROLLING P MEDICINE 510 THRE/ INCENSE + PHONE AC E-CIGARET LIGHTERS WHIP CRE. SCALES	GRINDERS HKTB	SMOKE AC GLASS PIP HHC	WHIP CRE. PHONE CA MINI TORCH HAND PIP															
38	E-LIQUID E-LIQUID E-CIGARET INCENSE + DELTA 8 / GLASS PIP BUTANE + LIGHTERS	HAND PIP E-LIQUID (KRATOM ZIPPO LIG HOOKAH / HOOKAH (PHONE AC HHC	GLASS ACC GENERAL I DETOX +																
43																			
44	ROLLING PAPER + FILTERS																		
51	ROLLING P GLASS PIP DELTA 8 / PHONE AC ADULT PIL 510 THRE/ LIGHTERS GRINDERS E-CIGARET KRATOM	PHONE CA HAND PIP BUTANE + INCENSE + SMOKE AC GLASS CLE GLASS ACC DRY + WA) WHIP CRE																	
54	DELTA 8 / NICOTINE E-LIQUID KRATOM ADULT PIL CBD EDIBL DRY + WA) E-LIQUID (BUTANE + ZIPPO LIG E-INCENSE + E-CIGARET HHC	CBD FLOW SCALES	GLASS CLE SMOKE AC MEDICINE THCO																
57	ROLLING P510 THRE/ADULT PIL DELTA 8 / KRATOM LIGHTERS HHC	E-CIGARET NICOTINE E-CIGARET ACCESSORIES																	
60	SCALES GENERAL I HERBAL N/HAND PIP DELTA 8 / KRATOM THCO	GRINDERS DRY + WA) HHC	BUTANE + JARS/SEAL E-CIGARET POCKET K ROLLING P SALT E-LIC SMOKE AC LIGHTERS MEDICINE																
61	E-LIQUID I KRATOM NICOTINE E-LIQUID (LIGHTERS 510 THRE/ INCENSE + HAND PIP HOOKAH (ADULT PIL GRINDERS HKTB	GLASS PIP DELTA 8 / BUTANE + DRY + WA) HOOKAH I SMOKE AHOOKAHS																	

Use Case

- The Advanced Analytics Mastersheet
- Targeted Email and SMS Campaigns
- Targeting High Repeat Rate and High Spend Customers
- Analyzing Cluster Characteristics for Targeted Promotions

Conclusion

- Flaws
- Future scope

References

1. W3school: [https://www.w3schools.com/ MySQL/DEFAULT.asp](https://www.w3schools.com/MySQL/DEFAULT.asp)
2. Code With Harry: <https://www.youtube.com/@CodeWithHarry>
3. AWS: <https://aws.amazon.com/>
4. Developer Mozilla: <https://developer.mozilla.org/en-US/>
5. Shashank Kalanithi: <https://www.youtube.com/@ShashankData>

Thank You