

PIVOT TABLE CASE STUDIES

CASE STUDY: IMDB MOVIE DATABASE

DATASET SUMMARY:

- *Movie titles, attributes, budgets and revenues from the Internet Movie Database (IMDb), 1920-2015*

DIMENSIONS & MEASURES:

- **Dimensions:** Title, Release Date, Color/B&W, Genre, Language, Country, Rating, Lead Actor, Director Name
- **Measures:** Lead Actor FB Likes, Cast FB Likes, Director FB Likes, Movie FB Likes, IMDb Score, Total Reviews, Duration (min), Gross Revenue, Budget

CONCEPTS COVERED:

- Number Formatting & Conditional Formats
- Sorting, Filtering & Grouping
- Calculated Values & Fields
- PivotCharts

	A	B	C	D	E	F	G	H	I	
1	Title	Release Date	Color/B&W	Genre	Language	Country	Rating	Lead Actor	Director Name	
2	Over the Hill to the Poorhouse	9/15/1920	Black and White	Crime	English	USA	Not Rated	Stephen Carr	Harry F. Millarde	
3	Metropolis	1/26/1927	Black and White	Drama	German	Germany	Not Rated	Brigitte Helm	Fritz Lang	
4	The Broadway Melody	11/11/1929	Black and White	Musical	English	USA	Passed	Anita Page	Harry Beaumont	
5	42nd Street	8/29/1933	Black and White	Comedy	English	USA	Unrated	Ginger Rogers	Lloyd Bacon	
6	Top Hat	4/15/1935	Black and White	Comedy	English	USA	Approved	Ginger Rogers	Mark Sandrich	
7	Modern Times	10/7/1936	Black and White	Comedy	English	USA	G	Paulette Goddard	Charles Chaplin	
8	Snow White and the Seven Dwarfs	2/2/1937	Color	Animation	English	USA	Approved	Adriana Caselotti	William Cottrell	
9	Gone with the Wind	11/12/1939	Color	Drama	English	USA	G	Hattie McDaniel	Victor Fleming	
10	The Wizard of Oz	4/9/1939	Black and White	Adventure	English	USA	Passed	Margaret Hamilton	Victor Fleming	
11	Fantasia	5/18/1940	Color	Animation	English	USA	G	Leopold Stokowski	James Algar	
12	Pinocchio	10/12/1940	Color	Animation	English	USA	Approved	Mel Blanc	Norman Ferguson	
13	Duel in the Sun	6/7/1946	Color	Drama	English	USA	Unrated	Joseph Cotten	King Vidor	
14	The Best Years of Our Lives	4/26/1946	Black and White	Drama	English	USA	Not Rated	Myrna Loy	William Wyler	
15	The Lady from Shanghai	12/7/1947	Black and White	Crime	English	USA	Not Rated	Rita Hayworth	Orson Welles	
16	The Pirate									
17	Annie Get Your Gun									
18	The Greatest Show on Earth									
19	The Beast from 20,000 Fathoms									
20	The Robe									
21	On the Waterfront									
22	Seven Samurai									
23	The Bridge on the River Kwai									
24	Some Like It Hot									
25	Psycho									
26	West Side Story									
27	Dr. No									
28	Lawrence of Arabia									
29	Cleopatra									
30	From Russia with Love									
31	It's a Mad, Mad, Mad, Mad, Mad									
		J	K	L	M	N	O	P	Q	R
		Lead Actor FB Likes	Cast FB Likes	Director FB Likes	Movie FB Likes	IMDb Score (1-10)	Total Reviews	Duration (min)	Gross Revenue	Budget
		2	4	0	0	4.8	1	110	3000000	100000
		136	203	756	12000	8.3	260	145	26435	6000000
		77	109	4	167	6.3	36	100	2808000	379000
		610	995	24	439	7.7	65	89	2300000	439000
		610	824	10	1000	7.8	66	81	3000000	609000
		309	352	0	0	8.6	120	87	163245	1500000
		82	229	0	0	7.7	145	83	184925485	2000000
		503	1862	149	16000	8.2	157	226	198655278	3977000
		695	2509	149	14000	8.1	213	102	22202612	2800000
		16	16	11	3000	7.8	99	120	76400000	2280000
		1000	1178	3	0	7.5	105	88	84300000	2600000
		469	2037	54	403	6.9	32	144	20400000	8000000
		749	1941	355	0	8.1	97	172	23650000	2100000
		1000	1055	0	0	7.7	90	92	7927	2300000
		89	282	136	359	7.1	41	102	2956000	3700000
		277	731	24	456	7	21	107	8000000	3768785
		232	825	309	625	6.7	44	152	36000000	4000000
		57	205	7	465	6.7	67	80	5000000	210000
		726	1920	28	0	6.8	42	135	36000000	5000000
		10000	11094	603	0	8.2	134	108	9600000	910000
		304	338	0	11000	8.7	153	202	269061	2000000
		682	1035	767	0	8.2	122	161	27200000	3000000
		105	527	0	10000	8.3	181	120	25000000	2883848
		606	1885	13000	18000	8.5	290	108	32000000	806947
		804	1802	34	0	7.6	120	152	43650000	6000000
		650	1421	92	5000	7.3	184	110	16067035	1100000
		607	1076	767	11000	8.4	181	227	6000000	15000000

n=3,725

CASE STUDY: U.S. VOTERS (2012)

DATASET SUMMARY:

- 2012 population and voter registration data from the U.S. Census Bureau, by state and age group

DIMENSIONS & MEASURES:

- **Dimensions:** State, Age
- **Measures:** Total Population, Citizen Population, Registered Voters, Confirmed Voters

CONCEPTS COVERED:

- Calculated Fields
- Value Settings (% of Column, % of Parent)

	A	B	C	D	E	F
1	State	Age	Total Population	Citizen Population	Registered Voters	Confirmed Voters
2	Alabama	18 to 24	439000	428000	212000	155000
3	Alabama	25 to 34	576000	535000	359000	271000
4	Alabama	35 to 44	615000	582000	410000	330000
5	Alabama	45 to 64	1297000	1275000	1051000	939000
6	Alabama	65+	667000	660000	523000	459000
7	Alaska	18 to 24	63000	61000	31000	20000
8	Alaska	25 to 34	109000	103000	70000	46000
9	Alaska	35 to 44	86000	80000	60000	50000
10	Alaska	45 to 64	186000	182000	144000	122000
11	Alaska	65+	72000	69000	55000	51000
12	Arizona	18 to 24	586000	545000	301000	234000
13	Arizona	25 to 34	859000	709000	399000	289000
14	Arizona	35 to 44	870000	713000	437000	382000
15	Arizona	45 to 64	1656000	1502000	1015000	901000
16	Arizona	65+	892000	846000	659000	606000
17	Arkansas	18 to 24	288000	281000	126000	70000
18	Arkansas	25 to 34	362000	336000	194000	140000
19	Arkansas	35 to 44	357000	341000	234000	205000
20	Arkansas	45 to 64	742000	704000	498000	442000
21	Arkansas	65+	449000	448000	324000	267000
22	California	18 to 24	3962000	3479000	1787000	1447000
23	California	25 to 34	5357000	4153000	2548000	2070000
24	California	35 to 44	5030000	3675000	2478000	2118000
25	California	45 to 64	9356000	7827000	5459000	4926000
26	California	65+	4653000	4284000	3084000	2902000
27	Colorado	18 to 24	493000	461000	278000	259000
28	Colorado	25 to 34	693000	602000	411000	363000
29	Colorado	35 to 44	684000	616000	484000	452000
30	Colorado	45 to 64	1354000	1287000	1025000	989000
31	Colorado	65+	593000	577000	437000	432000

n=255

CASE STUDY: SAN FRANCISCO SALARIES

DATASET SUMMARY:

- Salary information from San Francisco government employees, 2011-2013

DIMENSIONS & MEASURES:

- Dimensions:** Employee Name, Year, Employee ID, Job Title
- Measures:** Base Pay, Overtime Pay, Other Pay

CONCEPTS COVERED:

- Sorting & Filtering
- Grouping
- Calculated Fields
- Table Layouts

	A	B	C	D	E	F	G	H
1	Employee Name	Year	Employee ID	Job Title	Base Pay	Overtime Pay	Other Pay	Total Pay
2	A Bernard Fatooh	2011	29354	Sheriff'S Property Keeper	19969.37	0	70.54	20039.91
3	Aaric Pingree	2011	72817	Carpenter	0	0	100	100
4	Aarom Peverill	2013	34121	Public Service Aide-Special Programs	3202.14	0	64.19	3266.33
5	Aaron Obenyah	2012	105528	Publ Svc Aide-Asst To Prof	11577	0	0	11577
6	Aaron Richmond	2011	109147	Public Svc Aide-Public Works	2175.41	0	46.36	2221.77
7	Aaron A Hipolito	2011	105697	Museum Guard	10954.9	0	0	10954.9
8	Aaron C Ballonado	2011	78262	Police Officer 3	123471.15	8199.27	4905.3	136575.72
9	Aaron Chapman	2012	17857	Senior Physician Specialist	47885.61	0	20922.67	68808.28
10	Aaron D Lynch	2011	83567	Deputy Sheriff	87296.9	3265.58	13043.07	103605.55
11	Aaron Del Tredici	2011	41201	Physician Specialist	124568.92	0	3492	128060.92
12	Aaron Dunn	2013	13278	Transit Operator	65196.68	16571.53	2189.42	83957.63
13	Aaron E Vurek	2011	88715	Roofer	79136.84	883.8	2220	82240.64
14	Aaron Golbus	2012	51577	Wharfinger 2	78365.51	0	0	78365.51
15	Aaron H Freifeld	2012	105486	Recreation Leader	11757.37	0	64.44	11821.81
16	Aaron Hipolito	2011	68705	Museum Guard	10233.46	70.35	0	10303.81
17	Aaron J Cox	2012	107637	Public Svc Aide-Public Works	5723.62	0	0	5723.62
18	Aaron Loukonen	2013	52003	Special Nurse	85759.06	2505.87	14044.74	102309.67
19	Aaron Lozada	2012	38631	Sergeant 3	135967.46	16677.69	6370.85	159016
20	Aaron M Chen	2012	87533	Automotive Service Worker	64312.21	11361.2	12291.21	87964.62
21	Aaron M Del Tredici	2011	79047	Physician Specialist	129528.39	0	3600	133128.39
22	Aaron Patterson	2011	67426	Ps Aide Health Services	15131.57	0	0	15131.57
23	Aaron S Cramer	2013	79248	Registered Nurse	115372.35	8546.13	6484.78	130403.26
24	Aaron S Duran	2011	91293	Automotive Mechanic	73376.2	568.85	1998.63	75943.68
25	Aaron Sher	2011	33429	Public Service Aide-Assistant To Professionals	4666.32	0	0	4666.32
26	Aaron Smith	2012	41965	Is Engineer-Senior	115747.23	0	6329.79	122077.02
27	Aaron T Dunn	2013	86464	Transit Operator	68552.52	17182.65	2598.21	88333.38
28	Aaron Wu	2012	28292	Public Service Aide-Assistant To Professionals	27511.25	0	0	27511.25
29	Abayomi B Ikutiminu	2013	96696	Inspector, Weights & Measures	56641	0	540	57181
30	Abby Burg	2013	27362	Criminalist Ii	35189	0	0	35189

n=24,285

CASE STUDY: SHARK ATTACK RECORDS

DATASET SUMMARY:

- Shark attack records from 1900-2016

DIMENSIONS & MEASURES:

- Dimensions:** Case Number, Date, Type, Country, Area, Location, Activity, Name, Gender, Age, Injury, Fatal (Y/N), Species, Investigator or Source
- Measures:** None

CONCEPTS COVERED:

- Date Grouping
- Value Settings (% of Column, Running Total)
- PivotCharts

	A	B	C	D	E	F	G
1	Case Number	Date	Type	Country	Area	Location	Activity
2	1900.01.28	1/28/1900	Unprovoked	Australia	New South Wales	Lane Cove River, Sydney Harbor (Estuary)	Standing, gathering oyster
3	1900.07.00	7/1/1900	Provoked	USA	Connecticut	Bridgeport, Fairfield County	
4	1900.07.14	7/14/1900	Invalid	USA	Hawaii	Makapu'u Point, O'ahu	Hunting seashells
5	1900.07.31	7/31/1900	Unprovoked	Croatia	Primorje-Gorski Kotar County	Volosko, Opatija	Swimming
6	1900.08.21	8/21/1900	Unprovoked	USA	North Carolina	Southport, Brunswick County	Bathing
7	1900.09.05	9/5/1900	Unprovoked	USA	Hawaii	Waikiki Beach, Oahu	Floating
8	1900.09.13	9/13/1900	Unprovoked	USA	Rhode Island	Coddington Cove	Diving
9	1900.09.15	9/15/1900	Unprovoked	Australia	Queensland	Townsville	Swimming
10	1900.10.27	10/27/1900	Invalid	South Africa	Western Cape Province	Woodstock Beach, Cape Town	Swimming
11	1900.11.14	11/14/1900	Unprovoked	South Africa	Western Cape Province	Three Anchor Bay	Swimming
12	1900.12.27	12/27/1900	Unprovoked	Australia	New South Wales	Middle Harbour, Sydney	Bathing
13	1901.01.30	1/30/1901	Unprovoked	Australia	Queensland	Brisbane	Bathing
14	1901.06.24						
15	1901.06.29.R						
16	1901.07.17	Charles Duck	M	Unknown	Right posterior thigh bitten	N	Poverty Bay Herald, 2/12/1900
17	1901.07.30	skiff with Dr. William T. Healey,	M	Unknown	No injury to occupants. They shot shark, the	N	Times, 8/1/1900
18	1901.09.23.R	Emil Uhlbrecht & unidentified p	M	Unknown	Believed drowned. Uhlbrecht's foot, and the Y	N	Los Angeles Times, 7/28/1900
19	1901.10.00	male	M	Unknown	FATAL	Y	C. Moore, GSAF
20	1901.12.01	Burris	M	Unknown	Left hand lacerated	N	C. Creswell, GSAF
21	1902.01.19	Joe Hartman	M	Unknown	Bathing suit torn & "imprints of the shark's te	N	Honolulu Republican, 9/6/1900
22	1902.01.19.R	George Brown	M	Unknown	No injury	N	NY Times, 9/14/1900
23	1902.01.25.R	John Hennessy	M	Unknown	Laceration to right leg	N	Sydney Morning Herald, 9/17/1900
24	1902.02.22.R	Amos Layzell	M	Unknown	Probable drowning & scavenging	Y	P. Logan; M. Levine, GSAF
25	1902.04.00	William Strathorn	M	30	FATAL, legs severed	Y	P. Logan; M. Levine, GSAF
26	1902.06.00	Thomas Houston	M	Unknown	FATAL	Y	Taranaki Herald, 12/28/1900
27	1902.06.02	John Thompson	M	Unknown	Thigh bitten, FATAL	Y	Otago Witness, 2/6/1901
28	1902.07.06	S. McKie, apprentice 1st class o	M	Unknown	Left thigh stripped of flesh 4" above the knee	N	J.A. Guthrie; Sun, 7/13/1913; V.M. Coppleson, p.264 al
29	1902.07.15	boy	M	Unknown		N	The Graphic, 6/29/1901
30	1902.08.08	Antonio Tornatori	M	20	Disappeared, but shark involvement unconfi	Y	C. Moore
		John Hendrick Adrian Chandler,	M	29	Right leg bitten & foot severed, right arm bit	Y	M. Levine, GSAF
		male	M	Unknown	FATAL, bitten on arms, chest & legs	Y	Bardanis citing Embros, 9/23/1901
		Dahkus, a Molussa Moro	M	Unknown	Right thigh bitten	N	J.A. Guthrie, M.D.; Newark Advocate, 5/24/1902; V.M.
		William Quince	M	10	Lacerations to torso & thigh	N	The Argus, 12/2/1901
		Charles Jones	M	16	Legs bitten	N	Brisbane Courier, 1/20/1902
		a soldier from the Natal Garrisc	M	Unknown	Possible drowning & scavenging. Remains w	Y	M. Levine, GSAF
		John Ogier	M	Unknown	FATAL	Y	The Advertiser, 1/25/1902
		male	M	Unknown	No injury, hooked shark bit trowsers. PROVOK	N	The Colonist 2/22/1902
		Neil Sorenson	M	Unknown	Probable drowning & scavenging	Y	M. Levine, GSAF
		Giorgos	M	Unknown	Bitten on hand and thigh	N	M. Bardanis
		Apy	M	Unknown	"Nose hanging by a threat, prints of shark's t	N	V.M. Coppleson, p.264
		Harry M. Speerman	M	Unknown	Shark bit his left arm after he grabbed its tail	N	New York Times, 7/7/1902
		male	M	Unknown	Face & arms injured by hooked shark PROVOC	N	C. Moore, GSAF

n=5,292

CASE STUDY: STOCK MARKET DATA

DATASET SUMMARY:

- *3-month sample of stock market data for 500 publically-traded companies*

DIMENSIONS & MEASURES:

- **Dimensions:** Date, Symbol
- **Measures:** Open, High, Low, Close, Volume

CONCEPTS COVERED:

- *Sorting & Filtering*
- *Conditional Formatting (Highlight Cells, Data Bars)*
- *Value Settings (% Difference From)*

	A	B	C	D	E	F	G
1	Date	Symbol	Open	High	Low	Close	Volume
2	8/21/2009	A	25.6	25.61	25.22	25.55	34758
3	8/21/2009	AA	12.64	12.73	12.49	12.56	338295
4	8/21/2009	AAPL	167.81	169.37	166.8	169.22	148597
5	8/21/2009	ABC	21.14	21.25	20.9	21.05	33179
6	8/21/2009	ABT	45.58	46	45.315	45.39	84699
7	8/21/2009	ACS	45.08	45.33	44.4	45.32	17241
8	8/21/2009	ADBE	32.49	32.93	32	32.84	51086
9	8/21/2009	ADI	28.21	28.44	27.64	28.42	64696
10	8/21/2009	ADM	28.12	28.75	28.07	28.67	40472
11	8/21/2009	ADP	38.26	39.11	37.8	39.07	41981
12	8/21/2009	ADSK	24.4	24.91	24.14	24.51	38523
13	8/21/2009	AEE	26.58	27.11	26.46	27.05	13171
14	8/21/2009	AEP	31.31	31.65	31.04	31.49	39739
15	8/21/2009	AES	14.04	14.32	13.91	14.26	55350
16	8/21/2009	AET	29.89	30.34	29.38	29.62	60724
17	8/21/2009	AFL	40.56	42.2	40.3	41.87	58637
18	8/21/2009	AGN	55.71	56.24	55	55.43	19968
19	8/21/2009	AIG	34.42	35	32.53	32.85	493973
20	8/21/2009	AIV	11.46	12.06	11.41	11.95	36058
21	8/21/2009	AIZ	28.51	29.33	28.51	29.24	8827
22	8/21/2009	AKAM	18.07	18.5	17.955	18.42	44253
23	8/21/2009	AKS	20.75	21.12	20.724	20.87	53273
24	8/21/2009	ALL	28.22	28.77	27.85	28.63	39759
25	8/21/2009	ALTR	19.36	19.5	19.15	19.48	54580
26	8/21/2009	AMAT	13.53	13.75	13.32	13.74	159825
27	8/21/2009	AMD	3.53	3.71	3.51	3.7	201395
28	8/21/2009	AMGN	60.71	61.01	59.7	60.64	66052
29	8/21/2009	AMP	29.25	29.87	29	29.82	23186
30	8/21/2009	AMT	33.19	33.47	32.85	33.12	31521
31	8/21/2009	AMZN	84.88	85.06	83.54	85	61312

n=29,440

CASE STUDY: BASEBALL TEAM STATS

DATASET SUMMARY:

- Major League Baseball team statistics by season, 1995-2015

DIMENSIONS & MEASURES:

- Dimensions:** Season Start, Year, League, Team (Short), Team (Full), Division, DivWin, WCWin, LgWin, WSWin
- Measures:** G, W, L, RS, AB, H, 2B, 3B, HR, BB, SO, SB, CS, RA, ER, ERA, CG, SHO, SV

CONCEPTS COVERED:

- Sorting & Filtering
- PivotCharts & Slicers
- Calculated Fields

	A	B	C	D	E		F	G	H	I	J										
1	Season Start	Year	League	Team (Shor	Team (Full)	Division	DivWin	WCWin	LgWin	WSWin											
2	4/1/1995	1995	NL	ATL	Atlanta Braves	E	Y	N	Y	Y											
3	4/1/1995	1995	AL	BAL	Baltimore Orioles	E	N	N	N	N											
4	4/1/1995	1995	AL	BOS	Boston Red Sox	E	Y	N	N	N											
5	4/1/1995	1995	AL	CAL	California Angels	W	N	N	N	N											
6	4/1/1995	1995	AL	CHA	Chicago White Sox	C	N	N	N	N											
7	4/1/1995	1995	NL	CHN	Chicago Cubs	C	N	N	N	N											
8	4/1/1995	1995	NL	CIN	Cincinnati Reds	C	Y	N	N	N											
9	4/1/1995	1995	AL	CLE	Cleveland Indians	C	Y	N	Y	N											
10	4/1/1995	1995	NL	COL	Colorado Rockies	W	N	Y	N	N											
11	4/1/1995	1995	AL	DET	Detroit Tigers	E	N	N	N	N											
12	4/1/1995	1995	NL	FLO	Florida Marlins	E	N	N	N	N											
13	4/1/1995	1995	NL	HOU	Houston Astros	C	N	N	N	N											
14	4/1/1995	1995	AL	KCA	Kansas City Royals	C	N	N	N	N											
15	4/1/1995	1995	NL	LAN	Los Angeles Dodgers	W	Y	N	N	N											
16	4/1/1995	1995	AL	MIN	Minnesota Twins	C	N	N	N	N											
17	4/1/1995	1995	AL	ML4	Milwaukee Brewers	C	N	N	N	N											
18	4/1/1995	1995	NL	MON	Montreal Expos	E	N	N	N	N											
19	4/1/1995	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	
20	4/1/1995	G	W	L	RS	AB	H	2B	3B	HR	BB	SO	SB	CS	RA	ER	ERA	CG	SHO	SV	
21	4/1/1995	144	90	54	645	4814	1202	210	27	168	520	933	73	43	540	493	3.44	18	11	34	
22	4/1/1995	144	71	73	704	4837	1267	229	27	173	574	803	92	45	640	607	4.31	19	10	29	
23	4/1/1995	144	86	58	791	4997	1399	286	31	175	560	923	99	44	698	630	4.39	7	9	39	
24	4/1/1995	145	78	67	801	5019	1390	252	25	186	564	889	58	39	697	645	4.52	8	9	42	
25	4/1/1995	145	68	76	755	5060	1417	252	37	146	576	767	110	39	758	692	4.85	12	4	36	
26	4/1/1995	144	73	71	693	4963	1315	267	39	158	440	953	105	37	671	597	4.13	6	12	45	
27	4/1/1995	144	85	59	747	4903	1326	277	35	161	519	946	190	68	623	577	4.03	8	10	38	
28	4/1/1995	144	100	44	840	5028	1461	279	23	207	542	766	132	53	607	554	3.83	10	10	50	
29	4/1/1995	144	77	67	785	4994	1406	259	43	200	484	943	125	59	783	711	4.97	1	1	43	
30	4/1/1995	144	60	84	654	4865	1204	228	29	159	551	987	73	36	844	778	5.49	5	3	38	
31	4/1/1995	143	67	76	673	4886	1278	214	29	144	517	916	131	53	673	610	4.27	12	7	29	
32	4/1/1996	144	76	68	747	5097	1403	260	22	109	566	992	176	60	674	595	4.06	6	8	32	
33	4/1/1996	144	70	74	629	4903	1275	240	35	119	475	849	120	53	691	643	4.49	11	10	37	
34	4/1/1996	144	78	66	634	4942	1303	191	31	140	468	1023	127	45	609	527	3.66	16	11	37	
35	4/1/1996	144	56	88	703	5005	1398	270	34	120	471	916	105	57	889	814	5.76	7	2	27	
36	4/1/1996	144	65	79	740	5000	1329	249	42	128	502	800	105	40	747	689	4.82	7	4	31	
37	4/1/1996	144	66	78	621	4905	1268	265	24	118	400	901	120	49	638	586	4.11	7	9	42	
38	4/1/1996	145	79	65	749	4947	1365	280	34	122	625	851	50	30	688	651	4.56	18	5	35	
39	4/1/1996	144	69	75	657	4958	1323	218	34	125	446	994	58	39	618	557	3.88	9	9	36	
40	4/1/1996	144	67	77	730	4916	1296	228	18	169	565	911	112	46	761	697	4.93	8	4	34	
41	4/1/1996	144	69	75	615	4950	1296	263	30	94	497	884	72	25	658	603	4.21	8	8	41	
42	4/1/1996	144	58	86	629	4937	1281	245	27	125	456	972	84	55	736	666	4.7	11	7	29	
43	4/1/1996	144	70	74	668	4950	1345	231	20	116	447	872	124	46	672	589	4.13	6	10	35	
44	4/1/1996	145	79	66	796	4996	1377	276	20	182	549	871	110	41	708	644	4.5	9	8	39	
45	4/1/1996	144	67	77	652	4971	1256	229	33	152	472	1060	138	46	776	698	4.86	12	5	34	

n=624

CASE STUDY: SAN DIEGO BURRITO RATINGS

DATASET SUMMARY:

- Burrito ratings and Yelp reviews from 65 San Diego restaurants in 2016*

DIMENSIONS & MEASURES:

- Dimensions:** Location, Burrito, Date, Recommendation, Reviewer, Notes
- Measures:** Yelp Rating, Cost, Tortilla (0-5), Temp (0-5), Fillings (0-5), Meat Volume (0-5), Uniformity (0-5), Salsa (0-5), Synergy (0-5), Wrap Quality (0-5)

CONCEPTS COVERED:

- Calculating with COUNT
- Summarize Values By (SUM, AVERAGE)
- Show Values As (Rank)
- Conditional Formatting

	A	B	C	D	E	F					
1	Location	Burrito	Date	Recommendation	Reviewer	Notes					
2	Donato's taco shop	California	1/18/2016		Scott	good fries: 4/5					
3	Oscar's Mexican food	California	1/24/2016		Scott	Fries: 3/5; too little meat					
4	Oscar's Mexican food	Carnitas	1/24/2016		Emily						
5	Oscar's Mexican food	Carne asada	1/24/2016		Ricardo	Go to average burrito place like Rigoberto's in la jolla; Terrible tamales					
6	Pollos Maria	California	1/27/2016	Yes	Scott						
7	Pollos Maria	combo chicken	1/28/2016		Emily						
8	Nico's Taco Shop	California	1/30/2016	No	Scott	not fries. big potatoes					
9	Nico's Taco Shop	Carnitas	1/30/2016		Emily						
10	Los Primos Mexican Food	Monster California	2/1/2016		Scott	this tasted really bad leftover. not included in rating					
11	JV's Mexican Food	Carne Asada	2/6/2016	No	Scott						
12	JV's Mexican Food	Surf & Turf	2/6/2016		Emily	Huge. Shrimp is good. Meat is normal					
13	Tony's Fresh Mexican Food	Chile verde pork	2/11/2016		Marc						
14	Tony's Fresh Mexican	G	H	I	J	K	L	M	N	O	P
15	Tony's Fresh Mexican	Yelp Rating	Cost	Tortilla (0-5)	Temp (0-5)	Fillings (0-5)	Meat Volume (0-5)	Uniformity (0-5)	Salsa (0-5)	Synergy (0-5)	Wrap Quality (0-5)
16	Tony's Fresh Mexican	3.5	6.49	3	5	3.5	4	4	4	4	4
17	Taco Stand	3.5	5.45	2	3.5	2.5	2	4	3.5	2.5	5
18	Taco Stand		4.85	3	2	3	4.5	4	3	3	5
19	Graciela's Taco Shop		5.25	3	2	3	4	5	4	4	5
20	Graciela's Taco Shop	4	6.59	4	5	3.5	4.5	5	2.5	4.5	4
21	Rigoberto's Taco Shop		6.99	3	4	3.5	2.5	2.5	2.5	4	1
22	Rigoberto's Taco Shop	3	7.19	2	3	2	2.5	2.5		2	3
23	Lolita's taco shop		6.99	2.5	3	2.5	3	3.5		2.5	3
24	Lolita's taco shop	3	9.25	2	4.5	3.5	1.5	3	3.5	4	2
25	Taco Stand		6.25	2.5	1.5	3	4.5	3	1.5	2	4.5
26	Taco Stand	4	9.5	2.5	2.5	2.5	2.5	2	0.5	3	3.5
27	Lola's 7 Up Market & Deli		6.95	3	4	3	4	4	1	2	1
28	Lola's 7 Up Market & Deli	3	6.25	3	3.5	4	2	3.5	1	4	4
29	Colima's Mexican Food		6.99	3	1	2.5	4	4	3	4.5	5
30	Colima's Mexican Food		6.25	4		2	4	4		3	4
		4.5	7.49	3	2.5	4	3.5	2.5	3.5	5	4.5
			8.49	4	4	4	5	4.5	3.5	4	2
		4	5.99	4	4	3.5	4	4.5	4	4	4.5
			5.99	3.5	4		4		4	4	1.5
		2.5	6.4	3	4	3	4	2	2		5
			6.4	3.5	3	3	4	4	1.5		4.5
		4	8.75	1.5	2	3.5	4	1	3.5	4.5	4
			5.5	1.5	2.5	3	4	1.5	2.5	3.5	4.5
			7.49	4	3	4	4	4	4	4	3
			7.49	3	2	4	4	3.5	3	4.5	4.5

n=237

CASE STUDY: DAILY WEATHER CONDITIONS

DATASET SUMMARY:

- Daily weather conditions in Boston, Massachusetts from Jan-Dec 2016*

DIMENSIONS & MEASURES:

- Dimensions:** *Date, Conditions*
- Measures:** *Max Temp (F), Mean Temp (F), Min Temp (F), Max Wind Speed (MPH), Precipitation (in)*

CONCEPTS COVERED:

- Sorting & Filtering*
- PivotCharts*
- Date Grouping*
- Calculating with COUNT*

	A	B	C	D	E	F	G
1	Date	Conditions	Max Temp (F)	Mean Temp (F)	Min Temp (F)	Max Wind Speed (MPH)	Precipitation (in)
2	1/1/2016	Clear	41	39	33	32	0
3	1/2/2016	Clear	40	35	31	28	0
4	1/3/2016	Clear	44	36	31	28	0
5	1/4/2016	Clear	36	30	14	28	0
6	1/5/2016	Clear	26	16	8	23	0
7	1/6/2016	Clear	45	30	21	21.9	0
8	1/7/2016	Clear	43	33	26	18.1	0
9	1/8/2016	Clear	42	35	30	23	0
10	1/9/2016	Rain	41	40	38	18.1	0.01
11	1/10/2016	Rain	58	45	38	38.9	1.38
12	1/11/2016	Clear	51	40	25	38	0
13	1/12/2016	Snow	37	29	21	23	0.08
14	1/13/2016	Clear	33	29	21	47	0
15	1/14/2016	Clear	30	24	21	23	0
16	1/15/2016	Clear	42	31	26	17	0
17	1/16/2016	Rain	43	39	34	28	1.22
18	1/17/2016	Snow	38	35	29	21	0.1
19	1/18/2016	Snow	29	27	19	42.9	0.11
20	1/19/2016	Clear	25	20	16	45	0
21	1/20/2016	Clear	33	24	19	38	0
22	1/21/2016	Clear	33	27	21	35.1	0
23	1/22/2016	Clear	32	24	19	31.1	0
24	1/23/2016	Snow	32	29	20	45	0.37
25	1/24/2016	Clear	36	25	18	32	0
26	1/25/2016	Clear	35	31	26	19.9	0

n=363

CASE STUDY: SPARTAN RACE FACEBOOK POSTS

DATASET SUMMARY:

- Spartan Race Facebook posts from Aug-Oct 2016*

DIMENSIONS & MEASURES:

- Dimensions:** Page, Date of Post, Post Copy, Link, Post Type, Hour of Post, Time of Day
- Measures:** Shares, Reactions, Likes, Comments

CONCEPTS COVERED:

- Show Values As (% of Column)
- Calculated Fields
- Calculating with COUNT

	A	B	C					D				
1	Page	Date of Post	Post Copy					Link				
2	Spartan Race	8/30/2016	Find out tomorrow night how the sandbag carry will make or break the men's elite podium in the Penns...					https://www.facebook.com/spa				
3	Spartan Race	8/30/2016	Through grit and determination, fearless battles and triumphs, this mountain has been annointed with...					https://www.facebook.com/spa				
4	Spartan Race	8/30/2016	Tune in and work out with Epic Alexander Nichohlas at Epic Hybrid Training for today's "Lunchtime Wor...					https://www.facebook.com/spa				
5	Spartan Race	8/30/2016	Q&A with Epic Alexander Nicholas! Ask about his Lunchtime Workout routine or other ways to get fitne...					https://www.facebook.com/spa				
6	Spartan Race	8/30/2016	"It's an opportunity to learn from [Amanda], to learn that spirit." - Amelia BooneSpartan Pro, Ame...					https://www.facebook.com/spa				
7	Spartan Race	8/31/2016	Suns out guns out in Austin, Texas!! Spartan Strong host Evan Dollard talks about explosiveness when...					https://www.facebook.com/spa				
8	Spartan Race	8/31/2016	Alyssa Hawley Grip and rip challenge workout! http://sprtn.im/WHYIRACE_2016					https://www.facebook.com/spa				
9	Spartan Race	8/31/2016	There are a few simple do's and don'ts to avoid ankle pain, on and off the Spartan course.					http://sprtn.im/2bEWvP1				
10	Spartan Race	8/31/2016	Every racer has a story, what's yours? #WHYIRACE http://sprtn.im/WHYIRACE_2016					https://www.facebook.com/spa				
11	Spartan Race	8/31/2016	Join Spartan Pro Team member Cassidy Watton at Epic Hybrid Training in our "Lunchtime Workout" serie...					https://www.facebook.com/spa				
12	Spartan Race	8/31/2016	Tired o	D		E	F	G	H	I	J	K
13	Spartan Race	9/1/2016	The ea	1	Link	Post Type	Hour of Post	Time of Day	Shares	Reactions	Likes	Comments
14	Spartan Race	9/1/2016	Meet C	2	https://www.facebook.com/spa	video	0	Late Night	252	470	444	25
15	Spartan Race	9/1/2016	Sidelin	3	https://www.facebook.com/spa	video	14	Afternoon	129	399	382	18
16	Spartan Race	9/1/2016	Forget	4	https://www.facebook.com/spa	video	15	Evening	46	416	388	46
17	Spartan Race	9/1/2016	ASK EP	5	https://www.facebook.com/spa	video	15	Evening	15	202	193	25
18	Spartan Race	9/1/2016	#AROC	6	https://www.facebook.com/spa	video	23	Late Night	440	1046	879	48
19	Spartan Race	9/1/2016	IORF -	7	https://www.facebook.com/spa	video	0	Late Night	26	382	358	81
20	Spartan Race	9/1/2016	0	8	https://www.facebook.com/spa	video	13	Afternoon	73	600	544	105
21	Spartan Race	9/1/2016	#tbt to	9	http://sprtn.im/2bEWvP1	link	14	Afternoon	60	252	246	31
22	Spartan Race	9/1/2016	Follow	10	https://www.facebook.com/spa	photo	15	Evening	63	604	560	24
23	Spartan Race	9/1/2016	Coach	11	https://www.facebook.com/spa	video	15	Evening	27	377	353	43
24	Spartan Race	9/1/2016	Do you	12		status	20	Evening		100	88	86
25	Spartan Race	9/2/2016	Coach	13	http://apple.co/2c2iQ7M	link	4	Late Night	14	119	116	7
26	Spartan Race	9/2/2016	Causin	14	https://www.facebook.com/spa	video	13	Afternoon	28	352	321	45
27	Spartan Race	9/2/2016	Sparta	15	http://bit.ly/2bbLAH1	link	14	Afternoon	5	52	50	0
28	Spartan Race	9/2/2016	Join Sp	16	https://www.facebook.com/spa	video	15	Evening	49	278	249	30
29	Spartan Race	9/2/2016	Ask Sp	17	https://www.facebook.com/spa	video	16	Evening	5	229	209	42
30	Spartan Race	9/2/2016	BROCR	18	https://www.facebook.com/spa	photo	18	Evening	331	4862	3633	101
				19	https://www.facebook.com/Che	video	18	Evening		7	6	0
				20	https://www.facebook.com/eve	event	18	Evening		192	188	1
				21	https://www.facebook.com/spa	video	21	Evening	56	257	239	7
				22	https://www.facebook.com/spa	video	23	Late Night	129	1236	1178	14
				23	https://www.facebook.com/spa	video	23	Late Night	28	383	344	43
				24	https://www.facebook.com/suff	video	23	Late Night	1	727	647	97
				25	https://www.facebook.com/spa	video	14	Afternoon	34	284	260	34
				26	https://www.facebook.com/spa	photo	15	Evening	9	317	308	6
				27	https://www.facebook.com/spa	video	15	Evening	10	179	160	38
				28	https://www.facebook.com/spa	video	15	Evening	23	241	227	16
				29	https://www.facebook.com/spa	video	16	Evening	10	376	341	41

n=393