

PROJECT 1

Music Festival Echoes in SPL

Analyze the impact of specific music festivals in Seattle on the popularity of various music genres in the Seattle Public Library's collection.

Data Exploration Concept & MySQL Basics

QUERY DESCRIPTION

This query search aims to analyze the impact of Seattle's specific music festivals on music genre popularity at the Seattle Public Library from 2015 to 2023. It focuses on checkouts of CDs, DVDs, and books in different music genres, tracking changes in borrowing patterns during festival periods. This analysis will help determine if these events influence genre preferences, offering insights into how cultural events shape public music interests over time.



Capitol Hill Block Party

- Rock
- Pop
- Hip-hop
- Electronic

Northwest Folklife

- Folk
- Country

Bumbershoot

- Rock
- Pop
- Hip-hop
- Electronica

Belltown Bloom

- Indie
- Hip-hop
- Funk
- Soul

My concept is to analyze the impact of specific music festivals in Seattle (such as Capitol Hill Block Party, Bumbershoot, Belltown Bloom Festival, Beyond Wonderland Seattle and Northwest Folklife), on the popularity of various music genres in the Seattle Public Library's collection. While acknowledging the shift in music consumption to digital platforms, this project aims to examine how checkouts of CDs, DVDs, and books across different music genres have fluctuated over the years from 2015 to 2023.

CONCEPT

The project will query data trends in the number of checkouts for genres like pop, rock, jazz, electronica, country, folk, soul, blues, hip-hop and funk. The focus on a range of years will help in understanding how physical media usage has changed in the context of evolving digital consumption habits. While I plan to visualize these trends on a monthly basis for a broader overview, a key focus will be on analyzing data around the specific dates of different music festivals. This approach aims to pinpoint any impacts these events may have on borrowing patterns. By observing checkout fluctuations during and around music festivals, I intend to analyze whether there is a direct correlation between these cultural events and shifts in genre popularity at SPL.

POP**ROCK****JAZZ****ELECTRONICA****COUNTRY****FOLK****SOUL****BLUES****HIP-HOP****FUNK****GENRES**

Check Out Num: Date

This query provides a detailed view of the checkouts of different music genres for each day from 2015 to 2023, as a source of data for viewing specific festival dates.

```

1 SELECT
2     YEAR(cout) AS year,
3     MONTH(cout) AS month,
4     DAY(cout) AS day,
5     COUNT(IF(spl_2016.subject.subject LIKE '%jazz%',
6             1,
7             NULL)) AS 'jazz',
8     COUNT(IF(spl_2016.subject.subject LIKE '%rock%',
9             1,
10            NULL)) AS 'rock',
11    COUNT(IF(spl_2016.subject.subject LIKE '%electronic%'
12            OR spl_2016.subject.subject LIKE '%electronica%',
13            1,
14            NULL)) AS 'electronic',
15    COUNT(IF(spl_2016.subject.subject LIKE '%pop%',
16            1,
17            NULL)) AS 'pop',
18    COUNT(IF(spl_2016.subject.subject LIKE '%country%',
19            1,
20            NULL)) AS 'country',
21    COUNT(IF(spl_2016.subject.subject LIKE '%folk%',
22            1,
23            NULL)) AS 'folk',
24    COUNT(IF(spl_2016.subject.subject LIKE '%soul%',
25            1,
26            NULL)) AS 'soul',
27    COUNT(IF(spl_2016.subject.subject LIKE '%blues%',
28            1,
29            NULL)) AS 'blues',
30    COUNT(IF(spl_2016.subject.subject LIKE '%funk%',
31            1,
32            NULL)) AS 'funk',
33    COUNT(IF(spl_2016.subject.subject LIKE '%rap music%'
34            OR spl_2016.subject.subject LIKE '%hip hop%',
35            1,
36            NULL)) AS 'hip hop'
37 FROM
38     spl_2016.subject
39     JOIN
40     spl_2016.outraw ON spl_2016.outraw.bibNumber = spl_2016.subject.bibNumber
41 WHERE
42     (itemtype LIKE '%cd%'
43     OR itemtype LIKE '%dvd%'
44     OR itemtype LIKE '%bk%')
45     AND deweyClass LIKE '78%'
46     AND YEAR(cout) BETWEEN 2015 AND 2023
47 GROUP BY year , month , day
48 ORDER BY year , month , day

```

	year	month	day	jazz	rock	electronic	pop	country	folk	soul	blues	funk	hip hop
	2015	1	2	277	1036	88	957	90	92	43	88	14	83
	2015	1	3	302	1297	76	1157	121	113	37	78	11	113
	2015	1	4	194	823	63	752	109	46	24	65	5	62
	2015	1	5	291	1227	104	1197	131	97	33	88	13	136
	2015	1	6	330	1074	75	1017	157	122	26	82	11	138
	2015	1	7	270	1120	88	1102	141	89	27	109	6	112
	2015	1	8	271	1005	74	1029	102	97	31	62	10	117
	2015	1	9	253	839	52	759	97	45	37	80	10	71
	2015	1	10	296	1606	114	1499	145	137	49	76	18	124
	2015	1	11	251	964	88	982	103	87	25	56	14	95
	2015	1	12	347	1508	118	1470	142	132	33	137	13	171
	2015	1	13	271	1243	82	1143	133	71	40	107	17	129
	2015	1	14	278	1019	71	856	99	62	15	66	12	87
	2015	1	15	295	1126	65	1064	141	79	32	90	6	123
	2015	1	16	238	655	46	641	77	72	18	69	10	66
	2015	1	17	368	1451	108	1273	147	96	41	103	14	119
	2015	1	18	149	464	62	508	51	76	14	43	7	49
	2015	1	20	355	1568	92	1400	153	131	30	117	18	177
	2015	1	21	226	990	84	954	82	66	49	60	21	124
	2015	1	22	231	1030	61	871	90	85	26	72	5	71
	2015	1	23	145	713	47	644	85	52	30	50	9	46
	2015	1	24	295	1341	88	1114	111	84	32	110	15	103
	2015	1	25	145	799	65	743	84	63	19	32	8	104
	2015	1	26	252	1259	98	1226	143	101	41	113	12	126
	2015	1	27	302	1184	86	1094	116	73	33	49	14	100
	2015	1	28	256	1222	68	1175	132	86	40	107	15	111
	2015	1	29	232	1108	91	1049	139	87	29	72	13	111
	2015	1	30	178	762	61	692	92	47	21	72	15	62
	2015	1	31	406	1367	103	1238	149	78	26	102	18	113
	2015	2	1	97	421	24	426	49	63	11	33	12	41
	2015	2	2	250	1258	90	1128	146	74	24	90	18	143
	2015	2	3	252	1135	77	1125	101	93	37	79	27	128
	2015	2	4	239	1115	82	992	144	74	19	67	11	116
	2015	2	5	204	1153	92	988	136	92	20	62	13	105
	2015	2	6	229	744	51	678	85	83	27	71	2	70
	2015	2	7	282	1512	106	1380	126	108	29	98	15	131
	2015	2	8	147	739	50	734	72	57	23	61	8	98
	2015	2	9	290	1213	80	1097	109	98	34	91	11	107
	2015	2	10	296	1143	107	1131	117	81	29	73	22	113
	2015	2	11	234	1022	63	942	131	65	32	74	26	74
	2015	2	12	244	1213	53	1067	143	82	27	68	13	103
	2015	2	13	239	800	70	737	86	51	15	81	10	65
	2015	2	14	312	1479	110	1348	120	88	34	88	18	141
	2015	2	15	218	878	54	827	84	49	16	66	9	79
	2015	2	17	351	1451	126	1417	169	98	38	101	21	140
	2015	2	18	188	1072	85	1065	170	88	28	74	17	135
	2015	2	19	294	990	80	950	92	73	33	92	6	117

Check Out Num: Month

This query groups the checkout data by year and month, to observe how the popularity of different music genres has changed month by month over the years from 2015 to 2023. It will help to identify seasonal variations in genre popularity.

	SELECT	year	month	jazz	rock	electronic	pop	country	folk	soul	blues	funk	hip hop
2	YEAR(cout) AS year,	2015	1	7704	31800	2318	29606	3362	2466	901	2355	354	3043
3	MONTH(cout) AS month,	2015	2	7068	29305	2106	27529	3142	2086	755	2098	418	2946
4	COUNT(IF(spl_2016.subject.subject LIKE '%jazz%',	2015	3	8191	31665	2257	29691	3149	2397	819	2273	447	3333
5	1,	2015	4	7420	29342	2267	27702	2916	2255	768	2298	380	2963
6	NULL) AS 'jazz',	2015	5	6694	28467	2037	26657	3164	2005	736	2233	352	2785
7	COUNT(IF(spl_2016.subject.subject LIKE '%rock%',	2015	6	6210	28855	2118	26676	2951	2144	743	2271	336	2774
8	1,	2015	7	6680	28473	2110	25745	3040	2019	716	2197	341	2734
9	NULL) AS 'rock',	2015	8	6574	27873	2023	25582	3370	2074	853	2158	362	2763
10	COUNT(IF(spl_2016.subject.subject LIKE '%electronic%'	2015	9	6433	28396	1944	25309	3168	1963	801	2159	345	2411
11	OR spl_2016.subject.subject LIKE '%electronica%',	2015	10	6784	28944	2031	25223	3122	2004	795	2027	362	2315
12	1,	2015	11	7062	26408	1972	23590	3151	1870	706	2100	369	2186
13	NULL) AS 'electronic',	2015	12	6707	26355	2029	23991	2928	2055	741	1988	369	2323
14	COUNT(IF(spl_2016.subject.subject LIKE '%pop%',	2016	1	7247	29044	2244	26776	2842	2069	797	2080	348	2686
15	1,	2016	2	6281	26609	1827	23589	2842	1825	771	1916	359	2177
16	NULL) AS 'pop',	2016	3	6613	29460	1975	26539	2950	2128	868	1973	352	2799
17	COUNT(IF(spl_2016.subject.subject LIKE '%country%',	2016	4	6491	28037	1927	24112	3011	1627	760	1976	322	2454
18	1,	2016	5	6821	26273	1635	22219	2976	1481	759	1781	308	2233
19	NULL) AS 'country',	2016	6	6360	26026	1487	22880	2786	1559	741	1754	326	2260
20	COUNT(IF(spl_2016.subject.subject LIKE '%folk%',	2016	7	6062	26074	1509	22613	2892	1423	692	1591	284	2180
21	1,	2016	8	5993	26303	1664	23775	2756	1497	923	1799	399	2335
22	NULL) AS 'folk',	2016	9	6153	24017	1529	21925	2477	1527	886	1718	483	2126
23	COUNT(IF(spl_2016.subject.subject LIKE '%soul%',	2016	10	6048	24629	1656	22530	2505	1718	893	1775	424	2215
24	1,	2016	11	5475	23736	1492	22102	2586	1837	899	1848	414	2148
25	NULL) AS 'soul',	2016	12	6310	24286	1463	22733	2554	1674	848	1854	388	2124
26	COUNT(IF(spl_2016.subject.subject LIKE '%blues%',	2017	1	6416	25499	1609	24209	2670	1962	888	1952	386	2213
27	1,	2017	2	3868	15063	1006	14355	1501	1081	542	1188	295	1489
28	NULL) AS 'blues',	2017	3	6278	25364	1511	24752	2704	1741	992	2254	491	2478
29	COUNT(IF(spl_2016.subject.subject LIKE '%funk%',	2017	4	5819	23133	1413	22336	2392	1436	852	1864	395	2387
30	1,	2017	5	6323	25459	1706	23979	2644	1440	839	1987	392	2244
31	NULL) AS 'funk',	2017	6	5752	25226	1542	23992	2701	1534	870	2065	360	2060
32	COUNT(IF(spl_2016.subject.subject LIKE '%rap music%'	2017	7	5720	25756	1586	23898	2623	1416	795	1855	369	1962
33	OR spl_2016.subject.subject LIKE '%hip hop%',	2017	8	5479	25542	1489	24348	2819	1497	875	1922	394	2181
34	1,	2017	9	5452	24974	1661	23111	2926	1478	811	1784	327	1904
35	NULL) AS 'hip hop',	2017	10	5948	25504	1566	24031	2719	1453	818	1755	343	2047
36	FROM	2017	11	5428	23602	1491	22615	2417	1481	705	1645	341	1861
37	spl_2016.subject	2017	12	4918	21375	1319	20501	2109	1214	658	1567	327	1594
38	JOIN	2018	3	2340	8802	561	8665	876	539	237	606	101	680
39	spl_2016.outraw ON spl_2016.outraw.bibNumber = spl_2016.subject.bibNumber	2018	4	6078	24159	1658	23913	2526	1560	694	1917	356	2067
40	WHERE	2018	5	5356	21553	1420	21405	2441	1295	657	1805	323	1700
41	(itemtype LIKE '%cd%'	2018	6	5052	22506	1330	21798	2463	1458	680	1729	277	1693
42	OR itemtype LIKE '%dvd%'	2018	7	5173	21748	1387	20589	2230	1565	587	1572	249	1490
43	OR itemtype LIKE '%bk%')	2018	8	3636	14716	948	14381	1724	922	436	1089	167	1093
44	AND deweyClass LIKE '78%'												
45	AND YEAR(cout) BETWEEN 2015 AND 2023												
46	GROUP BY year , month												
47	ORDER BY year , month;												

Check Out Num: Year

This query provides a year-by-year comparison of checkouts across different music genres from 2015 to 2023. The results will show how the popularity of each genre has changed annually, helping to identify long-term trends in music genre popularity.

```

1 SELECT
2   YEAR(cout) AS year,
3   COUNT(IF(spl_2016.subject.subject LIKE '%jazz%',
4     1,
5     NULL)) AS 'jazz',
6   COUNT(IF(spl_2016.subject.subject LIKE '%rock%',
7     1,
8     NULL)) AS 'rock',
9   COUNT(IF(spl_2016.subject.subject LIKE '%electronic%'
10    OR spl_2016.subject.subject LIKE '%electronica%',
11    1,
12    NULL)) AS 'electronic',
13  COUNT(IF(spl_2016.subject.subject LIKE '%pop%',
14    1,
15    NULL)) AS 'pop',
16  COUNT(IF(spl_2016.subject.subject LIKE '%country%',
17    1,
18    NULL)) AS 'country',
19  COUNT(IF(spl_2016.subject.subject LIKE '%folk%',
20    1,
21    NULL)) AS 'folk',
22  COUNT(IF(spl_2016.subject.subject LIKE '%soul%',
23    1,
24    NULL)) AS 'soul',
25  COUNT(IF(spl_2016.subject.subject LIKE '%blues%',
26    1,
27    NULL)) AS 'blues',
28  COUNT(IF(spl_2016.subject.subject LIKE '%funk%',
29    1,
30    NULL)) AS 'funk',
31  COUNT(IF(spl_2016.subject.subject LIKE '%rap music%'
32    OR spl_2016.subject.subject LIKE '%hip hop%',
33    1,
34    NULL)) AS 'hip hop'
35 FROM
36   spl_2016.subject
37   JOIN
38   spl_2016.outraw ON spl_2016.outraw.bibNumber = spl_2016.subject.bibNumber
39 WHERE
40   (itemtype LIKE '%cd%'
41    OR itemtype LIKE '%dvd%'
42    OR itemtype LIKE '%bk%')
43   AND deweyClass LIKE '78%'
44   AND YEAR(cout) BETWEEN 2015 AND 2023
45 GROUP BY year
46 ORDER BY year;

```

year	jazz	rock	electronic	pop	country	folk	soul	blues	funk	hip hop
2015	83527	345883	25212	317301	37463	25338	9334	26157	4435	32576
2016	75854	314494	20408	281793	33177	20365	9837	22065	4407	27737
2017	67401	286497	17899	272127	30225	17733	9645	21838	4420	24420
2018	45650	183591	12041	176697	20370	11260	5514	14177	2304	13159
2019	62203	236762	16056	226591	29458	14913	6702	18504	3629	14925
2020	16665	64581	4133	60954	9068	4277	1864	4986	1006	3562
2021	29894	112057	7037	105420	14685	7443	3425	8812	1748	5859
2022	28713	113147	6078	101185	13619	6413	3513	9029	1313	5650
2023	29010	116573	6973	106165	14087	6996	3077	9208	1194	6218

CD Titles Frequency

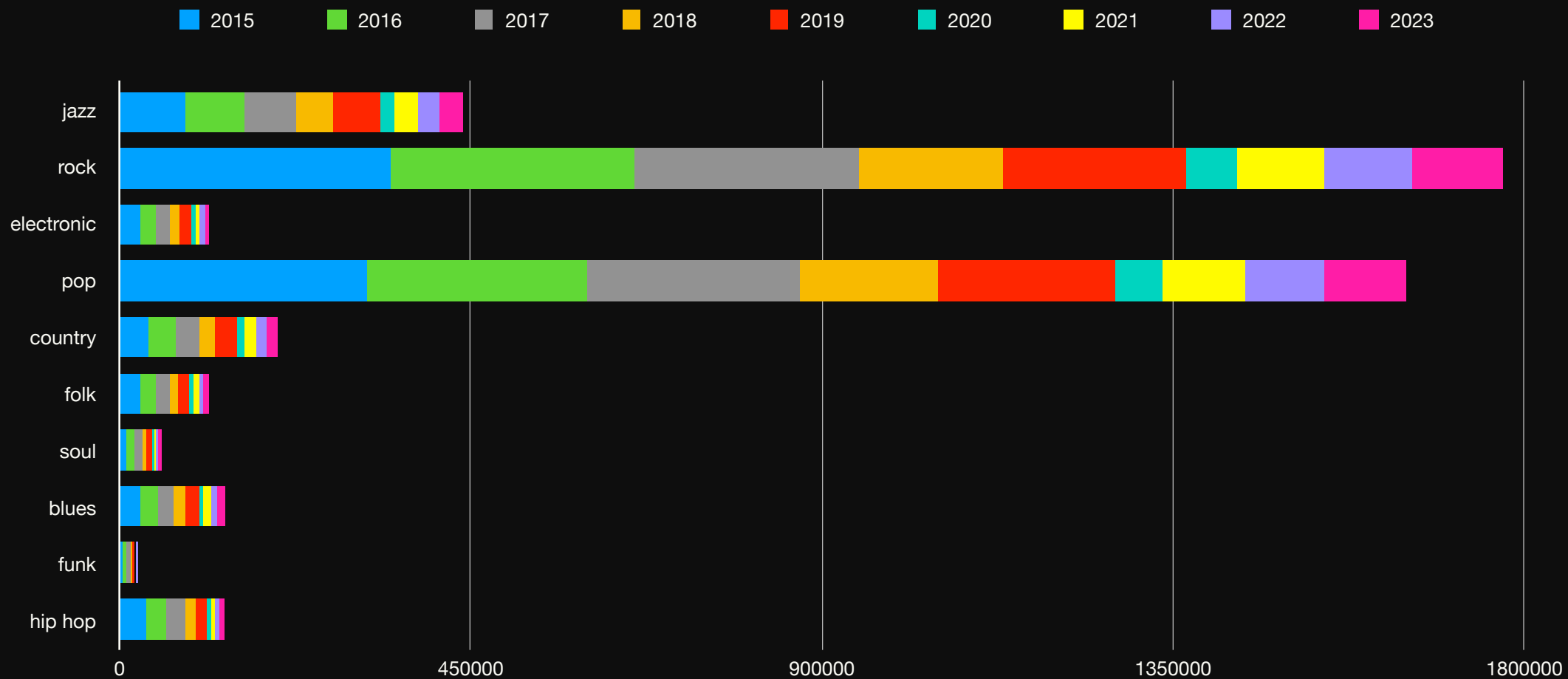
I'm also curious about the most frequently checked-out album each month, along with its genre. To explore this, I focused on the data for July 2021 as a case study. My query retrieves check-out data for CDs across a range of music genres. This can help to identify the most popular album for that month.

```

1 SELECT
2   CASE
3     WHEN spl_2016.subject.subject LIKE '%jazz%' THEN 'jazz'
4     WHEN spl_2016.subject.subject LIKE '%rock%' THEN 'rock'
5     WHEN
6       spl_2016.subject.subject LIKE '%electronic%'
7       OR spl_2016.subject.subject LIKE '%electronica%'
8     THEN
9       'electronic'
10    WHEN spl_2016.subject.subject LIKE '%pop%' THEN 'pop'
11    WHEN spl_2016.subject.subject LIKE '%country%' THEN 'country'
12    WHEN spl_2016.subject.subject LIKE '%folk%' THEN 'folk'
13    WHEN spl_2016.subject.subject LIKE '%soul%' THEN 'soul'
14    WHEN spl_2016.subject.subject LIKE '%blues%' THEN 'blues'
15    WHEN spl_2016.subject.subject LIKE '%funk%' THEN 'funk'
16    WHEN
17      spl_2016.subject.subject LIKE '%hip hop%'
18      OR spl_2016.subject.subject LIKE '%rap music%'
19    THEN
20      'hip hop'
21  END AS genre,
22  spl_2016.outraw.title AS Title
23 FROM
24  spl_2016.subject
25  JOIN
26  spl_2016.outraw ON spl_2016.outraw.bibNumber = spl_2016.subject.bibNumber
27 WHERE
28  (spl_2016.outraw.itemtype LIKE '%cd%')
29  AND YEAR(spl_2016.outraw.cout) = 2021
30  AND MONTH(spl_2016.outraw.cout) = 7
31  AND (spl_2016.subject.subject LIKE '%jazz%'
32  OR spl_2016.subject.subject LIKE '%rock%'
33  OR spl_2016.subject.subject LIKE '%electronic%'
34  OR spl_2016.subject.subject LIKE '%electronica%'
35  OR spl_2016.subject.subject LIKE '%pop%'
36  OR spl_2016.subject.subject LIKE '%country%'
37  OR spl_2016.subject.subject LIKE '%folk%'
38  OR spl_2016.subject.subject LIKE '%soul%'
39  OR spl_2016.subject.subject LIKE '%blues%'
40  OR spl_2016.subject.subject LIKE '%funk%'
41  OR spl_2016.subject.subject LIKE '%hip hop%'
42  OR spl_2016.subject.subject LIKE '%rap music%')
43  AND spl_2016.outraw.deweyClass LIKE '78%'
44 ORDER BY genre , Title

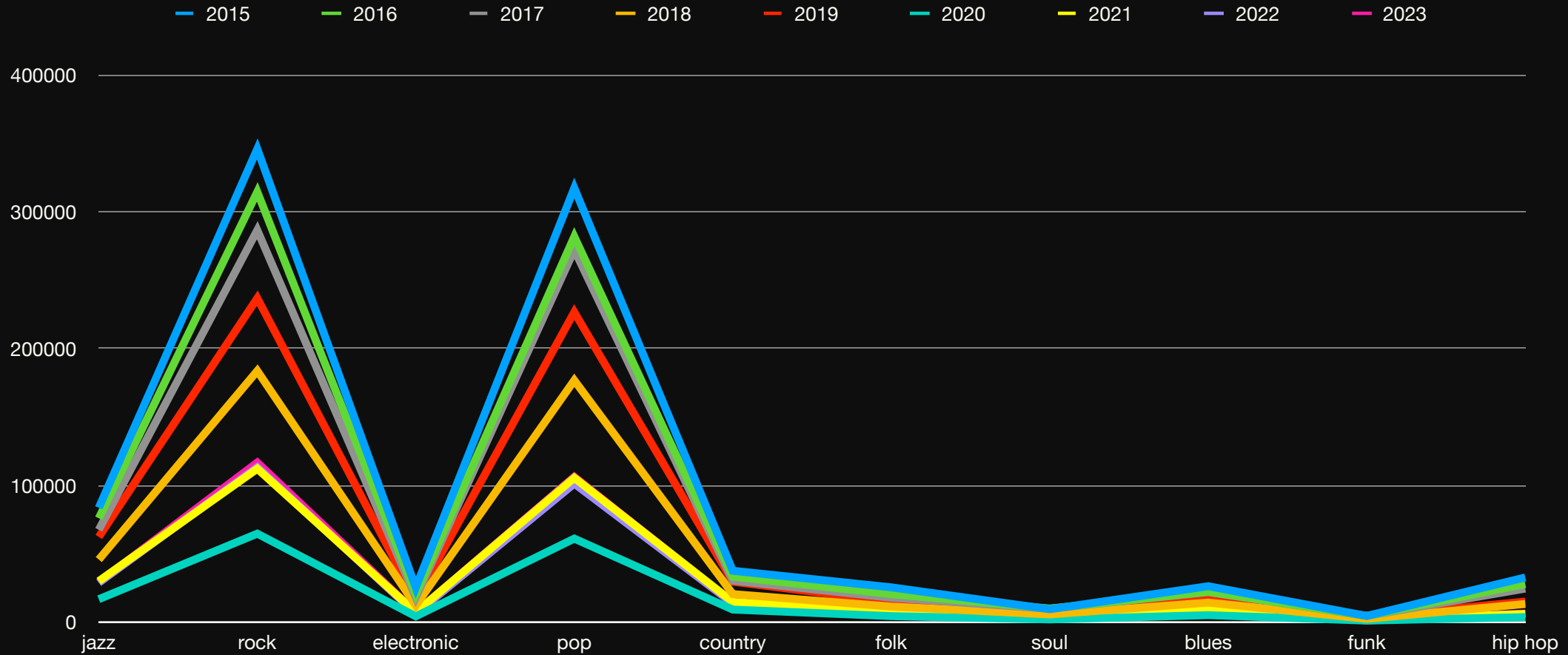
```

genre	Title
funk	Theres a riot goin on
funk	Theres a riot goin on
funk	Theres a riot goin on
funk	Tower of Power
funk	Tower of Power
funk	Tower of Power
funk	Tower of Power
funk	Turn this mutha out
funk	Ultimate Isaac Hayes Can you dig it
funk	Up for the down stroke
funk	What it is funky soul and rare grooves 1967 1977
funk	What it is funky soul and rare grooves 1967 1977
funk	What it is funky soul and rare grooves 1967 1977
funk	Wheedles groove Seattle funk modern soul boo...
funk	Wheedles groove Seattle funk modern soul boo...
funk	Wheedles groove Seattles finest in funk soul 19...
funk	Wheedles groove Seattles finest in funk soul 19...
funk	whole new thing
funk	whole new thing
hip hop	1 time mirage
hip hop	1977
hip hop	2001
hip hop	2014 Forest Hills Drive
hip hop	2pacalypse now
hip hop	2pacalypse now
hip hop	2pacalypse now
hip hop	2pacalypse now
hip hop	3 feet high and rising
hip hop	3 feet high and rising
hip hop	4 your eyez only
hip hop	4th dimensional rocketships going up
hip hop	808s heartbreak



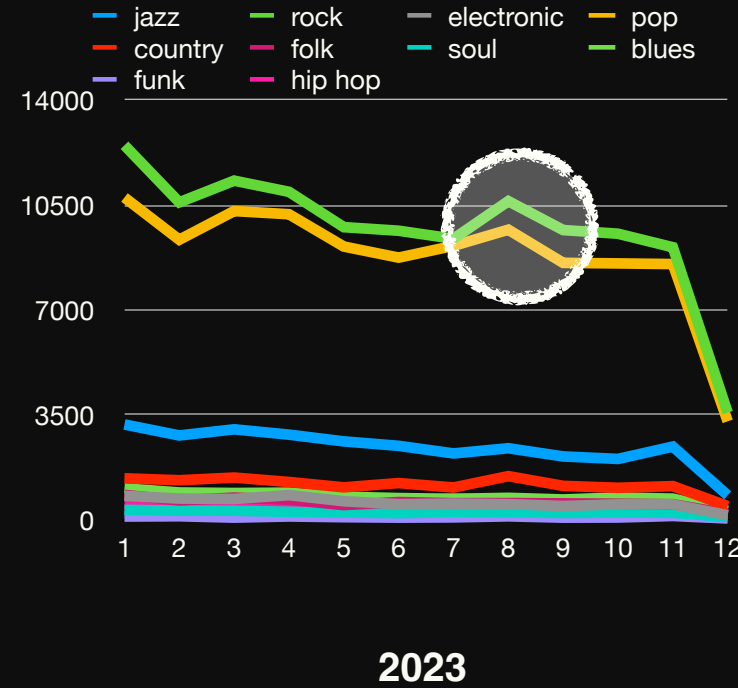
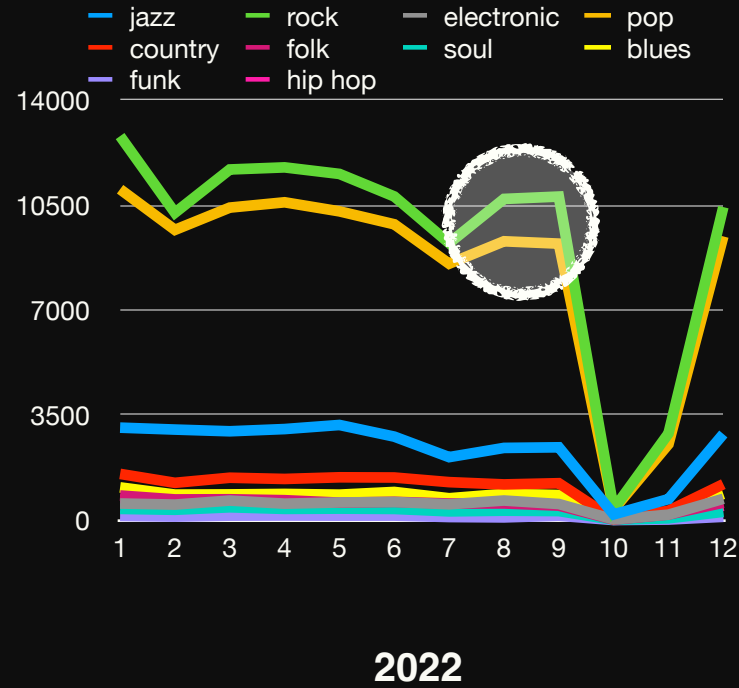
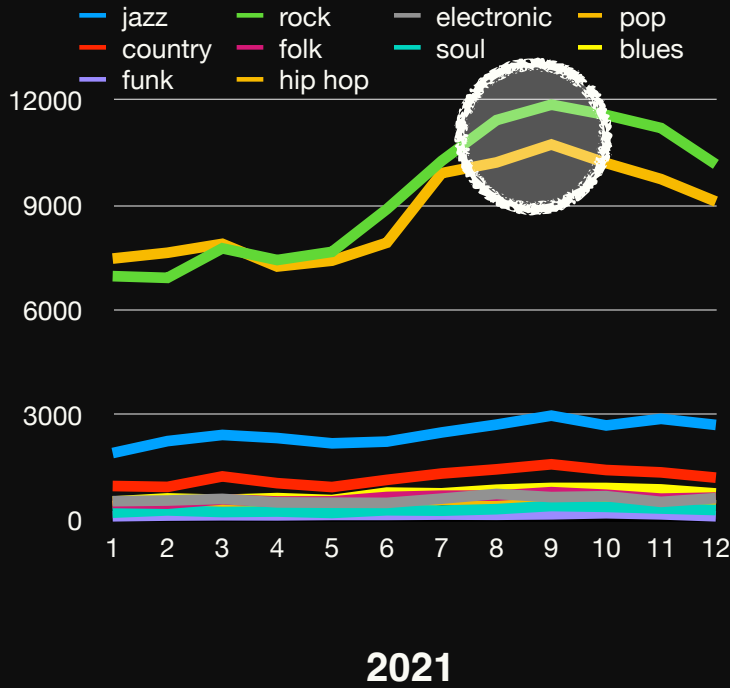
GRAPHS

Annual overview of music popularity (Bar Chart)



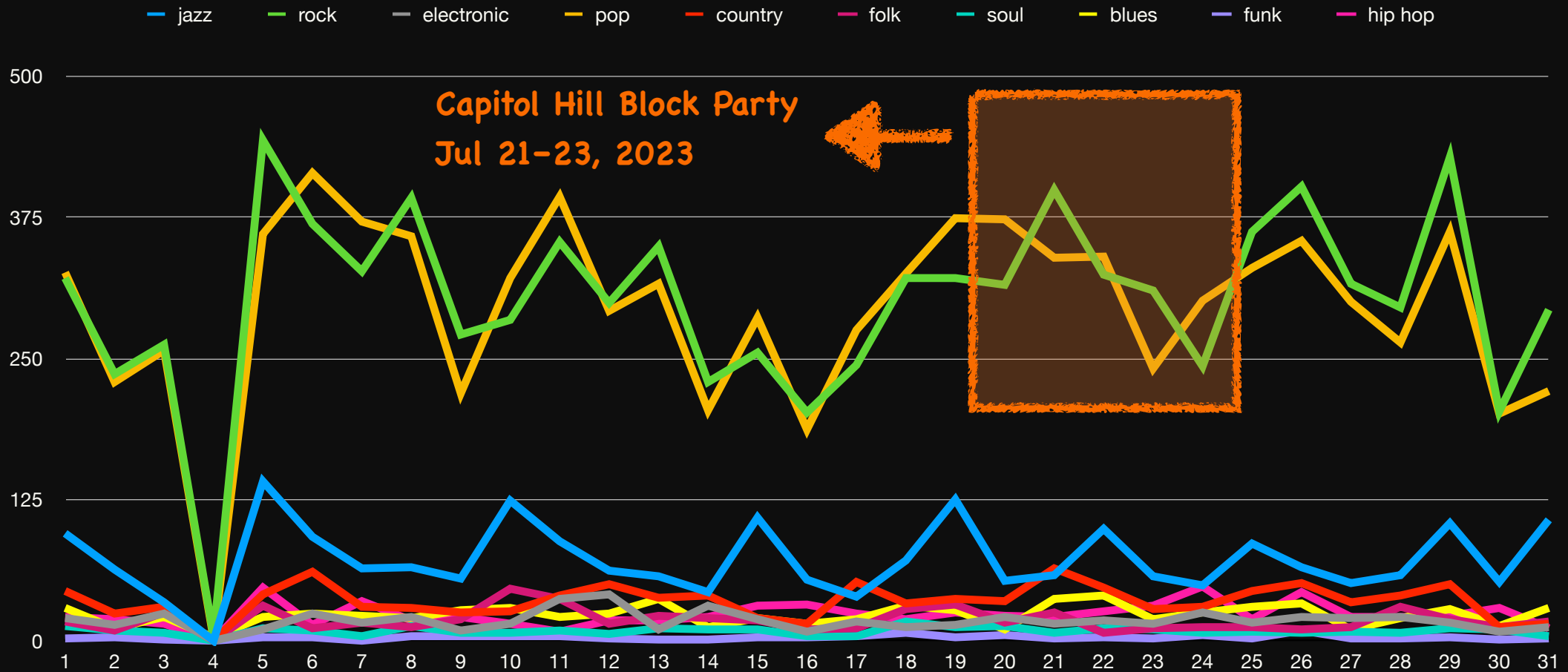
GRAPHS

Annual overview of music popularity (Line Graph)



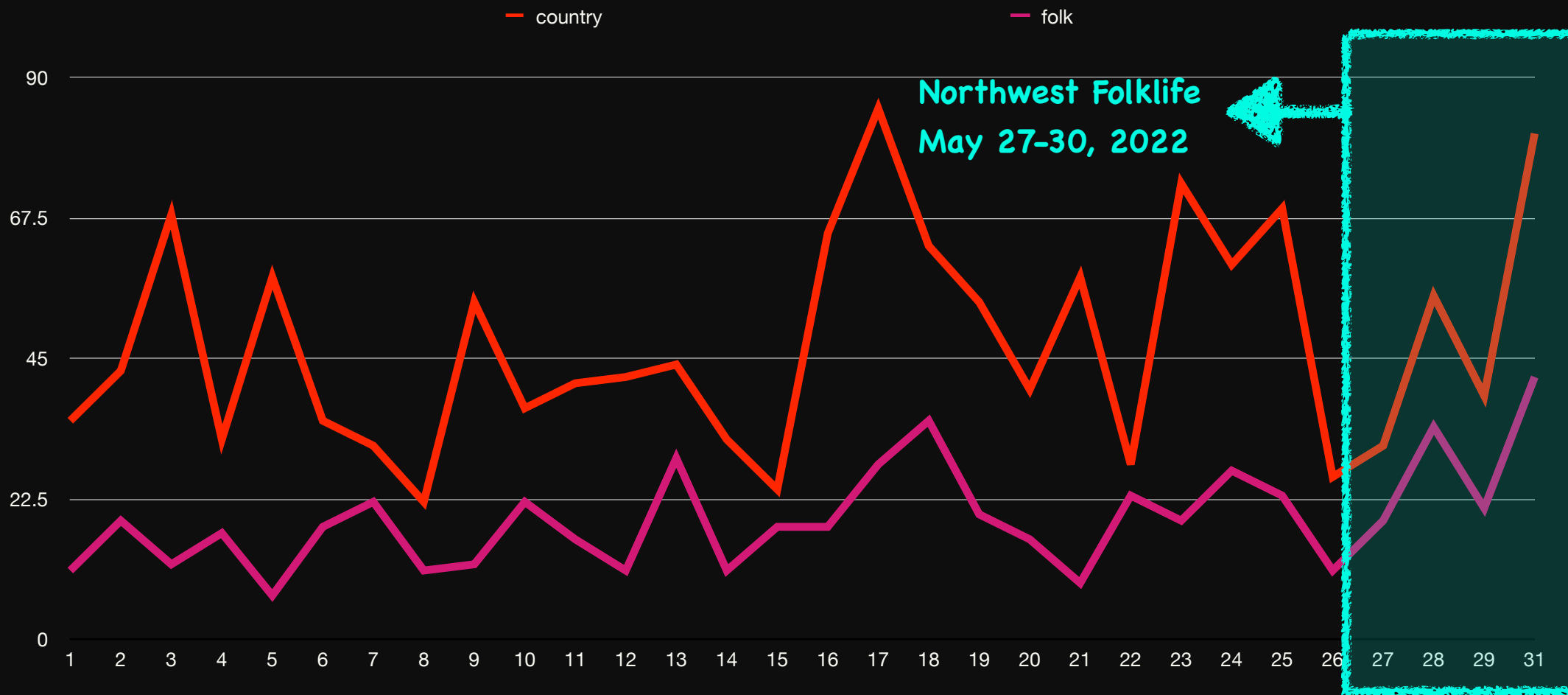
GRAPHS

Monthly overview of music popularity
(comparing 2021, 2022 and 2023 to find common ground)



GRAPHS

Overview of daily changes in music popularity over a month (in the case of July 2023)



GRAPHS

Daily changes in music popularity over a month
(in the case of May 2022)

CONCLUSION

Rock and pop music consistently lead in yearly music checkouts in SPL, with a peak in 2015 and a decline thereafter, reflecting the music consumption is shifting to digital formats. Monthly data shows a surge in these genres around September, aligning with Seattle's Bumbershoot festival. Additionally, daily checkouts peak before and after major festivals like Capitol Hill Block Party and Northwest Folklife, particularly in their respective genres. This pattern suggests that music festivals influence public interest in specific music genres, with increased borrowing of related CDs, DVDs, and books around these events.