Exploratory Data Analysis

Google Trends: Interest for Pho, Ramen and Soba Overtime

SQL Queries and Results:

1. **What is the average popularity for Pho, Ramen and Soba worldwide?**

```
select avg(Pho) from googletrends.dbo.NoodleTrends; 13
select avg(Ramen) from googletrends.dbo.NoodleTrends; 30
select avg(Soba) from googletrends.dbo.NoodleTrends; 7

Select Avg(Pho),Avg(Ramen), Avg(Soba)
From googletrends.dbo.NoodleTrends;
```

	(No column name)	(No column name)	(No column name)
1	13	30	7

2. **What is the max popularity for Pho, Ramen and Soba?**

```
select max(Pho) from googletrends.dbo.NoodleTrends; 54
select max(Ramen) from googletrends.dbo.NoodleTrends; 100
select max(Soba) from googletrends.dbo.NoodleTrends; 24


Select Max(Pho), Max(Ramen), Max(Soba)
From googletrends.dbo.NoodleTrends;
```

	(No column name)	(No column name)	(No column name)
1	54	100	24

3. **What is the lowest popularity for Pho, Ramen and Soba worldwide?**

```
select min(Pho), min(Ramen), min(Soba)
from googletrends.dbo.NoodleTrends; 5,5,2

Select Min(Pho), Min(Ramen), Min(Soba)
From googletrends.dbo.NoodleTrends;
```

	(No column name)	(No column name)	(No column name)
1	5	5	2

4. **What dates had the highest interest for each Pho, Ramen and Soba worldwide?**

5.
```
select Month from googletrends.dbo.NoodleTrends
where pho=54; 2021-12
```

	Month
1	2021-12

```
select Month from googletrends.dbo.NoodleTrends
where Ramen=100; 2022-08
```

	Month
1	2022-08

```
select Month from googletrends.dbo.NoodleTrends where
Soba=24; 2022-07, 2022-08
```

	Month
1	2022-07
2	2022-08

6. What dates had the lowest popularity for Pho, Ramen and Soba worldwide?

```
select Month from googletrends.dbo.NoodleTrends
where Pho= (select min(pho) from googletrends.dbo.NoodleTrends);2004-04
```

	Month
1	2004-04

```
select Month, Ramen from googletrends.dbo.NoodleTrends
where Ramen= (select min(Ramen) from googletrends.dbo.NoodleTrends);
```

	Month	Ramen
1	2004-04	5
2	2004-07	5
3	2004-12	5
4	2005-01	5
5	2005-02	5
6	2005-03	5
7	2005-04	5
8	2005-05	5
9	2005-06	5
10	2005-11	5
11	2005-12	5
12	2006-02	5
13	2006-03	5
14	2006-04	5
15	2006-05	5
16	2006-06	5
17	2006-07	5
18	2006-09	5
19	2006-10	5
20	2006-11	5
21	2006-12	5
22	2007-01	5
23	2007-02	5
24	2007-03	5
25	2007-04	5
26	2007-05	5
27	2007-06	5
28	2007-11	5
29	2007-12	5

```
select Month, Soba from googletrends.dbo.NoodleTrends
where Soba=(select min(Soba) from googletrends.dbo.NoodleTrends);
```

	Month	Soba
1	2004-01	2
2	2004-02	2
3	2004-03	2
4	2004-04	2
5	2004-05	2
6	2004-08	2
7	2004-09	2
8	2004-10	2
9	2004-11	2
10	2004-12	2
11	2005-01	2
12	2005-03	2
13	2005-04	2
14	2005-05	2
15	2005-09	2
16	2006-02	2
17	2006-03	2
18	2006-04	2
19	2006-05	2
20	2006-06	2
21	2006-08	2
22	2006-12	2
23	2007-01	2
24	2007-02	2
25	2007-03	2
26	2007-04	2

7. What years had the average popularity or higher for each Pho, Ramen and Soba (world) ?

```
select Month, Pho from googletrends.dbo.NoodleTrends
where Pho >= (select avg(Pho) from googletrends.dbo.NoodleTrends);
```

1	2011-07	13
2	2011-08	13
3	2011-09	13
4	2011-11	13
5	2011-12	13
6	2012-02	13
7	2012-04	13
8	2012-08	13
9	2012-09	14
10	2012-10	14
11	2012-11	13
12	2012-12	15
13	2013-01	16
14	2013-02	13
15	2013-03	14
16	2013-04	13
17	2013-05	13
18	2013-06	14
19	2013-07	14
20	2013-08	14
21	2013-09	15
22	2013-10	15
23	2013-11	16
24	2013-12	16
25	2014-01	17
26	2014-02	16
27	2014-03	16
28	2014-04	17
29	2014-05	17
30	2014-06	16
31	2014-07	17
32	2014-08	18
33	2014-09	17
34	2014-10	17
35	2014-11	18
36	2014-12	19
37	2015-01	17
38	2015-02	17
39	2015-03	17
40	2015-04	17
41	2015-05	17
42	2015-06	16
43	2015-07	18
44	2015-08	17
45	2015-09	18
46	2015-10	18
47	2015-11	18
48	2015-12	20
49	2016-01	19
50	2016-02	18
51	2016-03	17
52	2016-04	18
53	2016-05	18
54	2016-06	17
55	2016-07	18
56	2016-08	17
57	2016-09	20
58	2016-10	21
59	2016-11	20
60	2016-12	20
61	2017-01	19
62	2017-02	18
63	2017-03	17
64	2017-04	17
65	2017-05	16
66	2017-06	17
67	2017-07	17
68	2017-08	17
69	2017-09	18
70	2017-10	18
71	2017-11	18
72	2017-12	20
73	2018-01	20
74	2018-02	17
75	2018-03	18

76	2018-04	18
77	2018-05	17
78	2018-06	17
79	2018-07	17
80	2018-08	16
81	2018-09	19
82	2018-10	19
83	2018-11	19
84	2018-12	20
85	2019-01	20
86	2019-02	20
87	2019-03	20
88	2019-04	17
89	2019-05	17
90	2019-06	18
91	2019-07	22
92	2019-08	17
93	2019-09	18
94	2019-10	19
95	2019-11	19
96	2019-12	20
97	2020-01	19
98	2020-02	18
99	2020-03	14
100	2020-04	14
101	2020-05	16
102	2020-06	16
103	2020-07	15
104	2020-08	17
105	2020-09	17
106	2020-10	17
107	2020-11	18
108	2020-12	18
109	2021-01	18
110	2021-02	15
111	2021-03	17
112	2021-04	17
113	2021-05	16
114	2021-06	16
115	2021-07	18
116	2021-08	19
117	2021-09	19
118	2021-10	20
119	2021-11	25
120	2021-12	54
121	2022-01	25
122	2022-02	22
123	2022-03	20
124	2022-04	19
125	2022-05	20
126	2022-06	18
127	2022-07	19
128	2022-08	18
129	2022-09	19
130	2022-10	20
131	2022-11	22

```
select Month, Ramen from googletrends.dbo.NoodleTrends
where Ramen >= (select avg(Ramen) from googletrends.dbo.NoodleTrends);
```

	Month	Ramen
1	2016-12	60
2	2017-01	62
3	2017-02	64
4	2017-03	62
5	2017-04	63
6	2017-05	67
7	2017-06	67
8	2017-07	68
9	2017-08	73
10	2017-09	71
11	2017-10	68
12	2017-11	68
13	2017-12	69
14	2018-01	75
15	2018-02	72
16	2018-03	71
17	2018-04	69
18	2018-05	73
19	2018-06	69
20	2018-07	69
21	2018-08	77
22	2018-09	77
23	2018-10	75
24	2018-11	74
25	2018-12	73
26	2019-01	75
27	2019-02	30
28	2019-04	76
29	2019-05	76
30	2019-06	81
31	2019-07	81
32	2019-08	84
33	2019-09	81
34	2019-10	83
35	2019-11	82
36	2019-12	80
37	2020-01	87
38	2020-02	85
39	2020-03	73
40	2020-04	66
41	2020-05	68
42	2020-06	70
43	2020-07	76
44	2020-08	78
45	2020-09	80
46	2020-10	77
47	2020-11	76
48	2020-12	74
49	2021-01	78
50	2021-02	79
51	2021-03	78
52	2021-04	78
53	2021-05	79
54	2021-06	73
55	2021-07	81
56	2021-08	92
57	2021-09	89
58	2021-10	91
59	2021-11	95
60	2021-12	93
61	2022-01	89
62	2022-02	86
63	2022-03	82
64	2022-04	91
65	2022-05	90
66	2022-06	88
67	2022-07	94
68	2022-08	100
69	2022-09	97
70	2022-10	96
71	2022-11	98

```
select Month, Soba from googletrends.dbo.NoodleTrends
where Soba >= (select avg(Soba) from googletrends.dbo.NoodleTrends);
```

	Month	Soba						
1	2016-12	18	26	2019-01	16			
2	2017-01	15	27	2019-04	18			
3	2017-02	14	28	2019-05	21			
4	2017-03	14	29	2019-06	19			
5	2017-04	16	30	2019-07	19			
6	2017-05	19	31	2019-08	21	51	2021-04	17
7	2017-06	19	32	2019-09	17	52	2021-05	18
8	2017-07	19	33	2019-10	17	53	2021-06	18
9	2017-08	20	34	2019-11	18	54	2021-07	19
10	2017-09	18	35	2019-12	19	55	2021-08	19
11	2017-10	17	36	2020-01	17	56	2021-09	18
12	2017-11	16	37	2020-02	17	57	2021-10	21
13	2017-12	18	38	2020-03	15	58	2021-11	21
14	2018-01	16	39	2020-04	12	59	2021-12	23
15	2018-02	15	40	2020-05	15	60	2022-01	19
16	2018-03	15	41	2020-06	21	61	2022-02	17
17	2018-04	16	42	2020-07	19	62	2022-03	17
18	2018-05	20	43	2020-08	21	63	2022-04	20
19	2018-06	17	44	2020-09	18	64	2022-05	23
20	2018-07	19	45	2020-10	19	65	2022-06	22
21	2018-08	21	46	2020-11	18	66	2022-07	24
22	2018-09	17	47	2020-12	20	67	2022-08	24
23	2018-10	18	48	2021-01	15	68	2022-09	21
24	2018-11	18	49	2021-02	16	69	2022-10	21
25	2018-12	20	50	2021-03	16	70	2022-11	22

8. What was the first recorded interest vs. latest recorded interest for Pho, Ramen and Soba?

```
select Month, Pho, Ramen,Soba
from googletrends.dbo.NoodleTrends
where Month IN(select Month from googletrends.dbo.NoodleTrends
where Month LIKE '2004-01' OR Month LIKE '2022-11');
```

	Month	Pho	Ramen	Soba
1	2004-01	6	7	2
2	2022-11	22	98	22

9. What countries have highest and lowest interest for each category

```
select A.Country,A.Pho as PhoMin, B.Country, B.Pho as PhoMax
from googletrends.dbo.PhoRegion A, googletrends.dbo.PhoRegion B
WHERE A.Pho = (select min(Pho) from googletrends.dbo.PhoRegion) AND
B.Pho = (select max(Pho) from googletrends.dbo.PhoRegion);
```

	Country	PhoMin	Country	PhoMax
1	Mexico	<1	Australia	8
2	Spain	<1	Australia	8
3	Italy	<1	Australia	8
4	Brazil	<1	Australia	8

```
select A.Country,A.Ramen as RamenMin, B.Country, B.Ramen as RamenMax
from googletrends.dbo.RamenRegion A, googletrends.dbo.RamenRegion B
WHERE A.Ramen = (select min(Ramen) from googletrends.dbo.RamenRegion)
AND B.Ramen = (select max(Ramen) from googletrends.dbo.RamenRegion);
```

	Country	RamenMin	Country	RamenMax
1	Colombia	1	Hong Kong	9
2	Italy	1	Hong Kong	9
3	Peru	1	Hong Kong	9
4	Russia	1	Hong Kong	9
5	Argentina	1	Hong Kong	9
6	Vietnam	1	Hong Kong	9
7	Ukraine	1	Hong Kong	9
8	Brazil	1	Hong Kong	9
9	India	1	Hong Kong	9
10	Turkey	1	Hong Kong	9
11	Colombia	1	Philippines	9
12	Italy	1	Philippines	9
13	Peru	1	Philippines	9
14	Russia	1	Philippines	9
15	Argentina	1	Philippines	9
16	Vietnam	1	Philippines	9
17	Ukraine	1	Philippines	9
18	Brazil	1	Philippines	9
19	India	1	Philippines	9
20	Turkey	1	Philippines	9

```
select A.Country,A.Soba as SobaMin, B.Country, B.Soba as SobaMax
from googletrends.dbo.SobaRegion A, googletrends.dbo.SobaRegion B
WHERE A.Soba = (select min(Soba) from googletrends.dbo.SobaRegion)
AND B.Soba = (select max(Soba) from googletrends.dbo.SobaRegion);
```

	Country	SobaMin	Country	SobaMax
1	Mexico	<1	Croatia	9
2	Mexico	<1	Serbia	9
3	Mexico	<1	Singapore	9
4	India	<1	Croatia	9
5	India	<1	Serbia	9
6	India	<1	Singapore	9

10. Create Views

```
Create View [US_Interest] as
select Country, Pho
from googletrends.dbo.PhoRegion
where Country LIKE 'United_States';

select * from [US_Interest];
```

	Country	Pho
1	United States	10

```sql
Create view [Interest_Over_Time]
as select Month, Pho, Ramen,Soba
from googletrends.dbo.NoodleTrends
where Month IN(select Month from googletrends.dbo.NoodleTrends
where Month LIKE '2004-01' OR Month LIKE '2022-11');

select * from [Interest_Over_Time];
```

	Month	Pho	Ramen	Soba
1	2004-01	6	7	2
2	2022-11	22	98	22