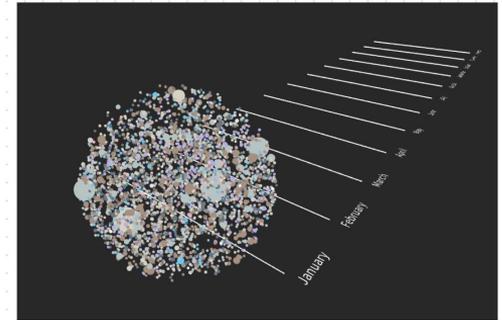
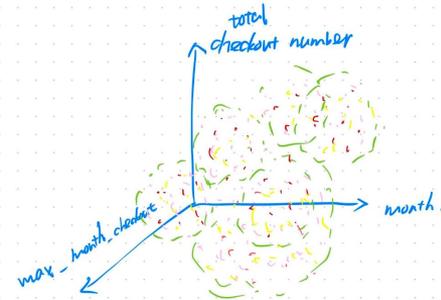

MAT 259: Project2

Chinese Related Books Interests at
Seattle Public Library (2006 - 2022)

Zeyu Wang

Initial Idea:

I am curious about Chinese-related books' interests with different Dewey classifications at Seattle Public Library. My initial idea was to create a computer-generated sketch that would display 17 spheres, each representing the number of checkouts of Chinese-related books during a specific year, ranging from 2006 to 2022. The size of each sphere is proportional to the total number of book checkouts in that year, resulting in 16 spheres of varying sizes. Additionally, I want to make the visualization even more intriguing and meaningful, so the x-axis represents this month as the most significant checkout number in the current year, the y-axis represents the checkout number of the month with the biggest checkout number, and the z-axis represents the total checkout number. The color represents the year.



Query & Data:

1. Select all results (the element should have dewey classification) from each year, unify the dewey class name, group by title.

```
select
COUNT(title) AS Counts, title,
case when deweyclass >= 900 and deweyclass < 1000 then 900 else deweyclass end
from (SELECT distinct id,barcode,itemNumber,itemtype, title, cout, deweyClass
FROM spl_2016.outraw
inner JOIN spl_2016.subject ON outraw.bibNumber = subject.bibNumber
where subject.subject like '%chinese' or subject.subject like '%china%') as A
WHERE YEAR(cout) = 2006 and deweyClass >= 900 and deweyClass < 1000
group by title, deweyclass
ORDER BY Counts DESC
LIMIT 50;
```

```
SELECT
COUNT(title) AS Counts,
title,
deweyclass
FROM
(SELECT
DISTINCT id, barcode, itemNumber, itemtype, title, cout,
CASE
WHEN deweyclass > 000 and deweyclass < 100 THEN 0
WHEN deweyclass >= 100 and deweyclass < 200 THEN 1
WHEN deweyclass >= 200 and deweyclass < 300 THEN 2
WHEN deweyclass >= 300 and deweyclass < 400 THEN 3
WHEN deweyclass >= 400 and deweyclass < 500 THEN 4
WHEN deweyclass >= 500 and deweyclass < 600 THEN 5
WHEN deweyclass >= 600 and deweyclass < 700 THEN 6
WHEN deweyclass >= 700 and deweyclass < 800 THEN 7
WHEN deweyclass >= 800 and deweyclass < 900 THEN 8
WHEN deweyclass >= 900 and deweyclass < 1000 THEN 9
ELSE deweyclass
END AS deweyclass
FROM spl_2016.outraw
INNER JOIN spl_2016.subject ON outraw.bibNumber = subject.bibNumber
WHERE subject.subject LIKE '%chinese' OR subject.subject LIKE '%china%'
) AS A
WHERE YEAR(cout) = 2006 and deweyclass != ''
GROUP BY title, deweyclass
ORDER BY Counts DESC;
```

Query & Data:

1. Select all results (the element should have dewey classification) from each year, unify the dewey class name, group by title.

2006			
year	Counts	title	class
2006	540	China	9
2006	523	Da Tang shuang long chuan	8
2006	433	story of the weeping camel Ingen numsil	9
2006	404	silk road	9
2006	224	Loc dinh kÃfÃ-	8
2006	206	Chop socky cinema Hong Kong	7
2006	179	1421 the year China discovered America	9
2006	154	Sesame Street Big Bird in China	9
2006	149	Into thin air a personal account of the Mount Everest disaster	7
2006	149	Ancient China	9
2006	133	Oracle bones a journey between Chinas past and present	9
2006	129	Shanghai ghetto	9
2006	128	Tan qing shuo ai yan chang hui DVD Sammi and Sally	7
2006	126	Jin qu man tian xing yan chang hui	7
2006	123	Tikki Tikki Tembo	3
2006	122	Li hua huang gong Jubilee the finale ya zhou ban karaoke	7
2006	119	Lin Yilian yan chang hui Sandy in concert	7
2006	117	Everest the death zone	7
2006	115	Fushigi yÃcÃcÃ"gi the mysterious play Vol 17 Demon	7
2006	114	Surviving Everest	7
2006	112	Eason Chan Sally Yeh	7
2006	109	Xun zhao Xu Xiake zu ji	9
2006	108	Li mao huan tai zi	7
2006	107	Zhen Ni 2001 yan chang hui Jenny in concert	7
2006	107	China a century of revolution	9
2006	105	Huai He cai feng	9
2006	105	Ye Feng yu chang jia ban Guo yu jin qu 30 nian yan chang hui	7

Query & Data:

2. Get year , month and checkout number relationship result.

years	total	max_month	max_count
2006	40202	8	4120
2007	35052	3	3924
2008	41989	1	3873
2009	41299	3	4037
2010	34837	1	3553
2011	30942	3	3110
2012	26028	7	2502
2013	27380	3	2540
2014	22982	1	2599
2015	19601	1	1971
2016	17271	1	1668
2017	15468	3	1551
2018	9639	4	1250
2019	13548	1	1399
2020	3692	1	1339
2021	7591	10	841
2022	9040	1	1043



Thinking:

- **Data Volume**
Data should be multivariate, and granular, but If the amount of data is too large, the screen will freeze.
- **Interesting**
It need some innovative design.
- **Meaningful**
Every data has its own meaning.

—

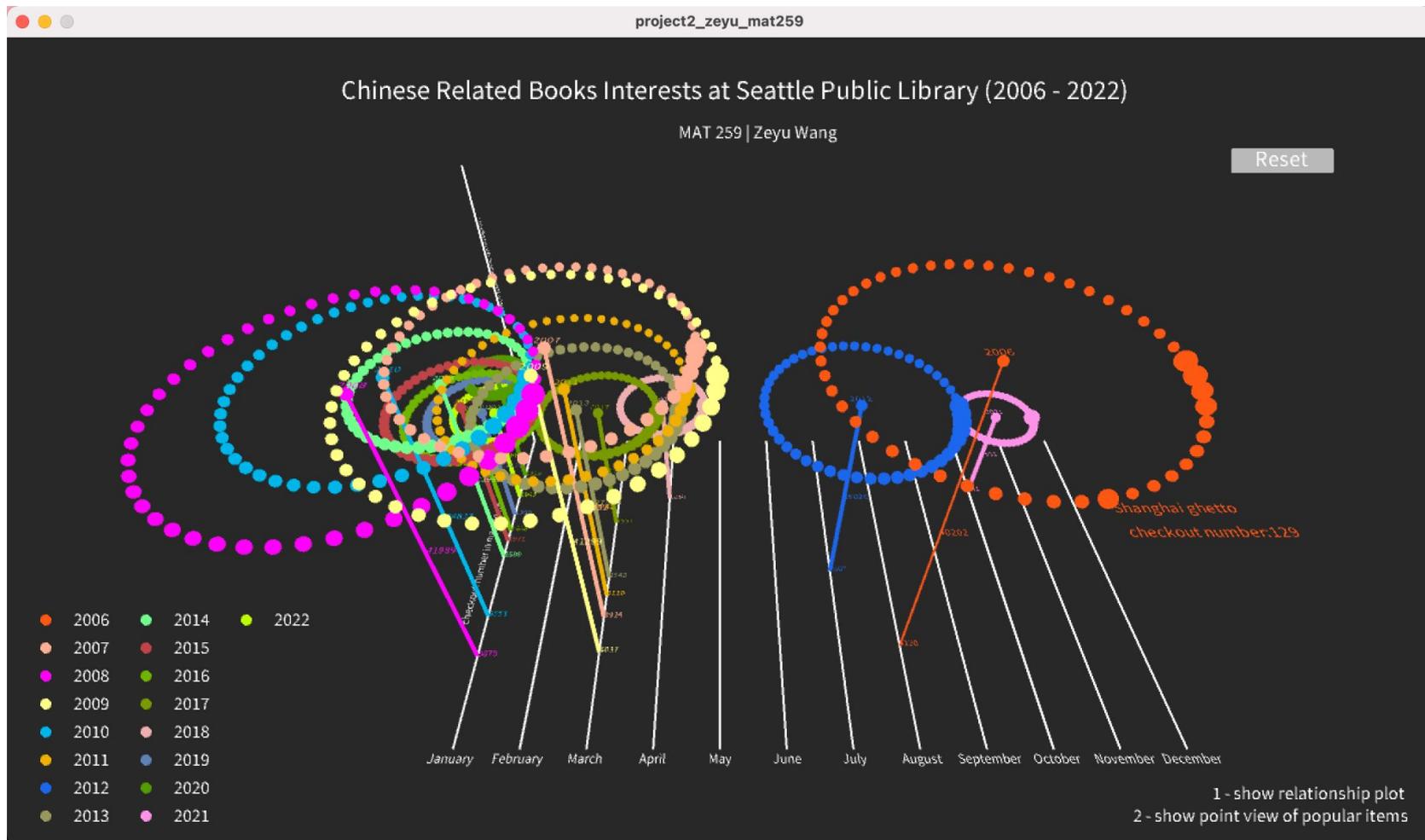
Implementation:

Two main views with interactions:

Plot: displays a plot that shows the checkout number of Chinese-related books over time, with a focus on the top 50 popular books.

Point: presents a 3D visualization of popular books over time, highlighting trends in five-year intervals

Plot View



Point View

