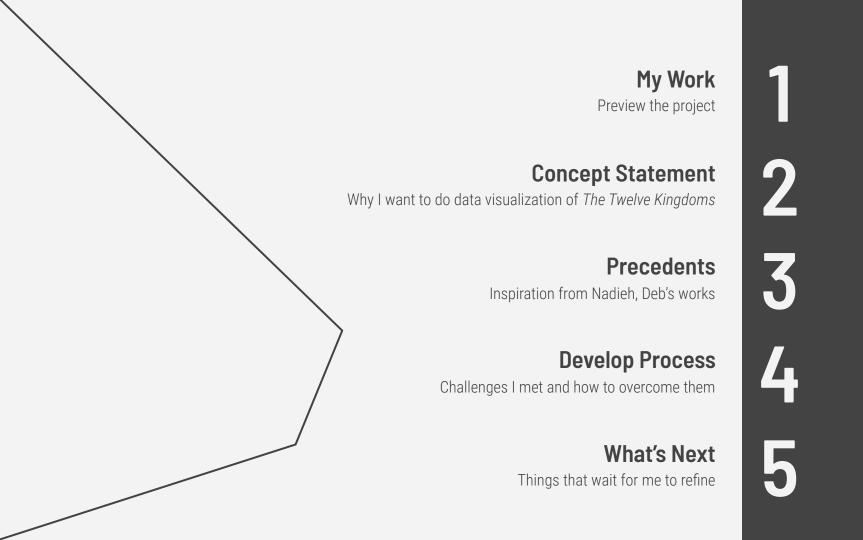
# **An Eastern Fantasy World**

-Data Visualization of *The Twelve Kingdoms* 

By: Yutong Han Advisor: Alberto Cairo





#### My Role

Designer, Developer

#### Timeframe

2020.02.01 - 2020.05.07

#### Link

An Eastern Fantasy World

#### Tool

Python, R, D3.js

### 1

# My Work

Preview the project

# **Concept Statement**

Why I want to do data visualization of *The Twelve Kingdoms* 

### **Concept Statement**

We are familiar with the western fantasy worlds, like *Harry Potter, Game of Thrones* and others. But do you know about the eastern fantasy world? Maybe you are an anime fan and you are familiar with *One Piece, Naruto* or something else. However, I bet you've never heard of *The Twelve Kingdoms*.

**The Twelve Kingdoms** is a series of fantasy novels written by Fuyumi Ono, then made into an anime in 2002. The world of the Twelve Kingdoms is based on the coexistence of youma (monsters), and sages. This world is similar to ancient China, particularly during the Zhou dynasty, over 2000 years ago. It's a great chance to know more about **eastern philosophy**, **tradition** and **imagination**.



### Concept Statement

In <u>Bilibili</u> (like Chinese YouTube), the anime *The Twelve Kingdoms* has over 106,000 bullet screen comments. They will accompany with you when you watch the anime. Over 8000 bottom comments are left under the video.





As one of Fuyumi's big fans, I will analyze and visualize seven books, bullet screen comments and bottom comments. I'd like to invite you to enjoy this unique world through data visualization.



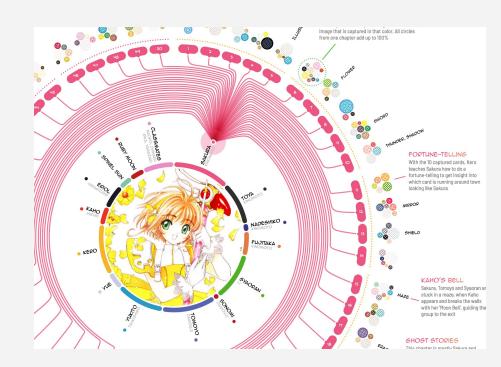
### **Precedents**

Inspiration from Nadieh, Deb's works

# Fifty chapters of adorable cuteness Cardcaptor Sakura

Nadieh Bremer

Data Visualization of the Anime Relationship between Characters



# Anne Sexton: Poetry Between Pain

Deb Pang Davis

Text Analysis of Books Sentiment Analysis of Words

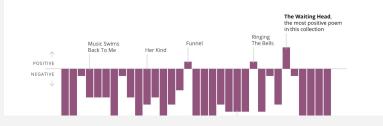
#### 1960

A POET RISES FROM THE ASHES

### To Bedlam and Part Way Back



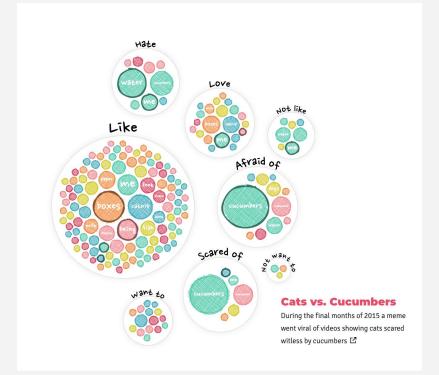
To Bedlam and Part Way Back, published by Houghton Mifflin was Anne Sexton's first published collection. It is a collection of works that encapsulates her struggles with mental illness, postpartum depression, motherhood, being a housewife during the '50s and the grief of losing her beloved grandmother "Nana" in 1954. The poems in Bedlam exhibit the influence of W.D. Snodgrass who encouraged Anne to continue in the autobiographical style and find her voice <sup>11</sup>. Music Swims Back to Me (1957) and Double Image are two of her signature poems in Bedlam. The Division of Parts is an elegy she wrote to her mother.



### Why Do Cats & Dogs ...?

Nadieh Bremer

Forced D3 Bubble Charts
Nested Hierarchical JSON Structure



4

# Develop Process

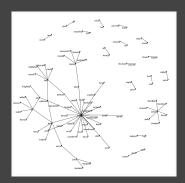
Challenges I met and how to overcome them



Scrape data of comments from Bilibili by Python



2.26 - 3.15 Clean and roughly visualize the data by R



# Scrape and Clean the Data

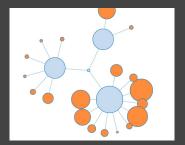
I met some troubles when I want to scrape mandarin from the website. Because it's different from English. And this website needs VPN to load comments.

Luckily, I found library pandas can help me scrape mandarin. And I asked my friend in China to run the code to solve the VPN problem.

Another problem is I have no idea how to do n-gram in Python. Even though I watched some tutorials, it's still so hard for me to understand.

Fortunately, Deb recommended the book  $\underline{\textit{Text Mining with R}}$  to me. Do n-gram by R is much easier. In this way, I successfully found out the relationships between characters, and words.

3.10 - 3.25 Visualize the cleaned data by D3



3.16 - 4.10 Build the website, combine the charts and contents



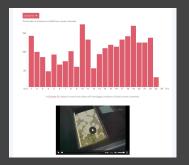
### Visualize the Data, Build the Website

I tried to create bubbles by D3 after solving the n-gram problem. The challenge at this step is to create force among bubbles and change the stroke between them into different thickness. Because I created treemap charts by D3 last semester, I wasn't stuck with the json file for a long time.

I know my article will be very long, since seven books, bullet screen comments and bottom comments will be visualized and analyzed. So I need to organize my website very convenient for users to go through.

I add the top sticky navigation, supplementary instructions in the sidebar, tooltips to make them freely read. 4.11 - 4.25

Add the button for users to jump among episodes.



4.16 - 5.6 Add texts and images in the context.



### Add button for Episodes, Improve the Website

Because I want to know which moment is the climax part per episode, I combined the chart and the video of the minute with the highest number of comments. You can use the button to change episode to see the change.

For book 6 and 7, they are composed of several short stories. So I cut them into separate bubble charts.

And I keep refining the website according to Professor Cairo, Clay, Lenny's suggestions.

#### **Final Work:**

An Eastern Fantasy World

### **What's Next**

Things that wait for me to refine

### **Next Step**





#### Page load time is too long.

I will try "<u>Lazy Loading</u>" to make the website more fluent.

### The images in tooltip is not consistent.

I will redraw other characters in my style. Then I will change the images in the tooltip.

### **Next Step**



As the most important character in this novel, it's no doubt that Shushou appeared the most times, which are 713 times. At the beginning of the novel, Shushou pretended to mindlessly spill her soup on her servant girl's clothes. Then she exchanged her clothes with her

#### File Edit View Insert Format Data Tools Add-ons Help Last edit was on Marci n n = ₱ 100% + \$ % .0 .00 123+ Default (Ari... + 10 + B I third-time watch the anime the pit Shunki 很荣幸在人生观型性期遇到了theTwelveKingdoms。 十二年了 第五朝人特别的,工事的。 third-time watch the anime the nit Shunki 祝敬意在人生视频性I third-time watch the anime the nit Shunki 很久之前赞了你,这次回来又看到你的评论,忍不住给你留言。《Like a long time before you came back to 我遇到的都是黑暗致豫 the anime 真的,小时候第一遍看,前八集我差点存圆,觉得太沉闷,结果; Really, a child watching the first pass, the 第三编看了。每一次看都会有不同的感受。在我最痛苦的时候调! Read the third time, every time to see will 时隔两年的对话,我 the first time看,不过,肯定不会失望的吧。After two years of dialogue, I see the first 我到现在都没能看清自己,设法适应这个人心诡辩难测的社会。If I still failed to see themselves, not the per 是真的! 在我人生低谷期自怨自艾的时候看了这个,太幸运了。 it is true! In my life trough of self-pity when 最近有新闻、作者Ono Fuyumi 要 fill the pit 了。 as long as I am Recently, news, author Ono Fuyumi to fil 10035 1025 Eh Yo, plagiarism 我说他拉蒂、你们可以唐我 I say he copied, you can spray m - 80-18E-1E 真的(//\\)??? Really (// V //)? ? Country Tai的故事、日文版已经出了、中文版还没出。"Ono Fuyi Country Tai's story, the Japanese So long detained 出了起码得有一两个月了吧,不过是日语的 A must have at least a couple of months 大正时代没有这种枪把、参考鬼灭之刃里玄弥用的枪 Taisho era no such gun, in reference to th 被里人折磨的袋 艾辛素第二溴了除价价 I was tortured man, he came to see the se Rakushun是深刻大义草棉出身的银后。cake是体验高冷身世界製 Rakushun after Yin righteous grass-roots Brothers Nichi sh 概要計算型 habababa(sticker Looked good funny ah hahahaha (sticke 我不服, Kek明明是正宫 I am satisfied, Kelki obviously palace Rakushun是深明大义草根出身的皇贵妃,cake是体弱高冷身世显 Rakushun is righteous grass-roots origin Nichi innisivo **学玉才是正宮! 芸会書认近** Lan Yu is the palacel Van Tai Fu Certifica 我差点就信了你的邪 I almost believed your evil greet(sticker) 各价能 went into the nit 的图发、这是文字理影团员 greet (sticker) went into the nit to the new 不达别接后型的现在 (全打架器) habshaha(eticker) 3333333. Not allowed to come out the high of the te

#### The chart is not mobile friendly.

The content is mobile friendly, but the chart is not. I adjusted first two charts size on phone. But the result is not ideal. I will find a new way to solve it.

#### The auto translator is not good enough.

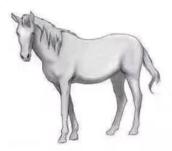
Because the comments are mandarin, I wanted to do mandarin n-gram in the beginning.

However, I ask the R experts, and they told me there is no way to do that. So I used Google auto translator. But the result is not great enough. I'm looking for a new way to analyze the data.

Beginning



Midterm



Final Work



# Q & A

## **Thank You**





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