

Supervisor Meeting 12

Date & Time: 19 April 10:30am - 12:00pm

Venue: SIS Meeting Rm 4.5

Attendees: Prof. Kam Tin Seong (Supervisor), Wang Sijia, Ren Mengxi, Wang Tianjing

Absentees: Null

Agenda:

1. Ask for feedback on the academic paper
2. Consult about the townhall presentation

Details:

1. How can you improve on the academic paper:
 - a. currently no focus
 - b. should allow readers to read this paper from fresh perspective. Don't assume that they know the background beforehand.
 - c. Now they have problem to understand the main focus of your sharing. Should rename it to better title
 - d. it is a research paper, it's not a report. Be selective. spend more time on those what you think is important for the community, but no need to cover everything. Select a particular theme, approach, etc
 - e. Do a bit research in order to write your paper
2. Two possible directions to continue on your paper
 - a. Data visualization perspective.
 - i. possible way to present Time -series data. focus on how to review the time series patterns: mosaic plot, box plot, heatmap, etc.
 1. Treemaps to visualize the time patterns, look at the changes over the time
 2. Heatmap
 - a. What is heatmap
 - b. Why we choose it
 - c. What's the difference between heatmap and other graphs
 3. Boxplot
 - a. You want to understand the distribution change over time. How could this one be used to review patterns?
 - b. Compare with line graph
 - c. What makes it so unique, useful sharing
 4. Cycle plot:
https://www.perceptualedge.com/articles/guests/intro_to_cycle_plots.pdf

5. Trellis graph/multi plot: (Figure 7 - 10) SMU library search “trellis display”: Robbins, N. (2010). Trellis display. *Wiley Interdisciplinary Reviews: Computational Statistics*, 2(5), 600-605.
<http://onlinelibrary.wiley.com.libproxy.smu.edu.sg/doi/10.1002/wics.121/full>

- ii. Although we have this, but we need to deep into the method, be condensed, really understand why this graph is so unique and how could it link to your own work. Think about context
- iii. Update the title: Spatial time series visualization approach analysis

b. Statistical testing:

- i. Exploratory => confirmative analysis (ANOVA analysis)
- ii. Some reference paper about ANOVA test.
 - 1. Basis of ANOVA
 - 2. Ignore the medical part, see how people come up with their story: Why we should it
 - 3. Cherry pick and study from them

c. Better to focus on only one?

- i. Visualization: From literature review -> link to our own work, put in a proper context.
- ii. Confirmative: Business analysis used to use bar chart. But for data analysis is not enough. We need to do confirmative analysis. Johe Tukey, father of EDA.
- iii. Accept or reject the hypothesis in conclusion. give managerial recommendations

3. Feedback from Prof:

- a. No much change needed in the screenshot for ANOVA. Don't put in table form, make it clear
- b. Visual: cycle plot need to add in reference line etc. For the rest of the graph, trellis figure 7- 10 , should include reference line and reference region, reference line helps to add in context. Mean or median as reference line.
- c. Figure 7: value should not be total, should be average instead of total.
- d. 1-7 Just recode to Monday - Friday make it more friendly. Time: 7am ... or 7:00
- e. 1-24 change to 1am to 11pm or 1:00 to 23:00
- f. Paper presentation each team 15min. 1 person need to present on stage. Use slides. Highlight the paper, introduction, literature review, findings, classmates, industrial partners, other university students will be present.
- g. Submit paper, presentation slides by Sunday. Today get your poster done, then presentation slides, paper is fine to edit a bit a few times until Sunday.

Action Plan:

Item	Person in charge	Deadline
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Poster	Wang Sijia	20 April
Slides	Wang Sijia, Ren Mengxi	20 April
Report	Wang Sijia, Ren Mengxi, Wang Tianjing	20 April