Notebook

March 15, 2019

Question 1 According to Strogatz, why do people experience airplanes, restaurants, parks, and beaches to be more crowded than averages would suggest?
[Please answer in one or two sentences]

I have no idea!

Question 2a Which two groups did Christakis and Fowler monitor to see who got the flu first? *[Please answer in one sentences]*

Write your answer here, replacing this text.

Question 2b Which group ended up actually getting the flu first?
[Please answer in one]

Write your answer here, replacing this text.

Question 8 What does the friendship paradox predict about the values in the 'degree' and 'avg_friends_degree' column of the `friend_data` Table that you just made? Does it say that (i) on average, they should be about the same; (ii) on average, `degree` should be bigger than `avg_friends_degree`; or (iii) on average, `avg_friends_degree` should be bigger than `degree`?

Write your answer here, replacing this text.

Question 9 Now make a scatter plot that shows at the relationship between the degree of each node (x axis) and the average degree of the node's friends (y axis).

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In [43]: ...
```

Question 10 Does the plot you just made seem consistent with what would be predicted from the friendship paradox?

Write your answer here, replacing this text.

Question 13 Make a scatterplot that compares the average degree (x axis) and the average neighbor degree (y axis) across all of the Add Health networks.

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In [65]: ...
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Question 14 Does the scatterplot you just made seem to be consistent with the friendship paradox?
Write your answer here, replacing this text.

Question 15 Make a histogram that shows, across all of the Add Health networks, the distribution of the fraction of nodes whose degree is smaller than the neighbors' average degree.

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In [66]: ...
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Question 16 Does the histogram you just made seem to be consistent with what you would expect from the friendship paradox?

Write your answer here, replacing this text.