The dataset for midterm is titled "farmers_market_info.csv". It contains data from USDA website (https://www.ams.usda.gov/local-food-directories/farmersmarkets). The dataset contains details about all the registered farmers market (8778 farmers market) in US including location, time, latitude, longitude, products, and payment mode. Assume you are working for a big consulting firm. A client requires some insights about farmers market. Answer the following questions that helps the client to understand more about the farmers market scene in the US.

Problem 1 (20 points)

For this problem you need not depend on map based visualizations. You can come up with innovative visualization techniques (city or county or state based) that gives geography based insights about the farmers market.
Example: How farmers market is distributed in north, east, west, south, and mid direction?

Problem 2 (20 points)

Give time based insights (trends) that show the evolution of farmers market.
Example: How the number of farmers market change over different months?

Problem 3 (20 points)

Give product based insights that helps the client to understand the type of products or product mix in farmers market across the country
Example: How does the count vary for each product type?
Example: Compare counts of dairy products, meat products and plant products

Problem 4 (20 points)

Give insights on payment modes used by the farmers market
Example: Compare the counts of different payment modes

Problem 5 (20 points)

Give insights that are derived from the combination of above four questions.
Example: How does the dairy product count change according to geographical location?

Example: Which payment mode is most offered in northeastern part of the country?

Additional Information

1. Submit the midterm by midnight (October 23)

2. Type all the codes in R markdown file with .Rmd extension

3. Present all the insights in a report (word or pdf) containing detailed description and visualizations

4. Submit the .Rmd file and the report via blackboard link

5. Remember the report is for the client. So do not include the procedures followed for the visualizations

6. Each question is followed by an example. Students need not stick to those examples alone. Students can find alternative insights

7. There are no fixed answers for each problem. The best and innovative insights will fetch more points. Number of visualizations is not the objective of this midterm.

8. Points will be given for consistency in visualization (large size fonts, font types, labels, legends, color scheme etc)