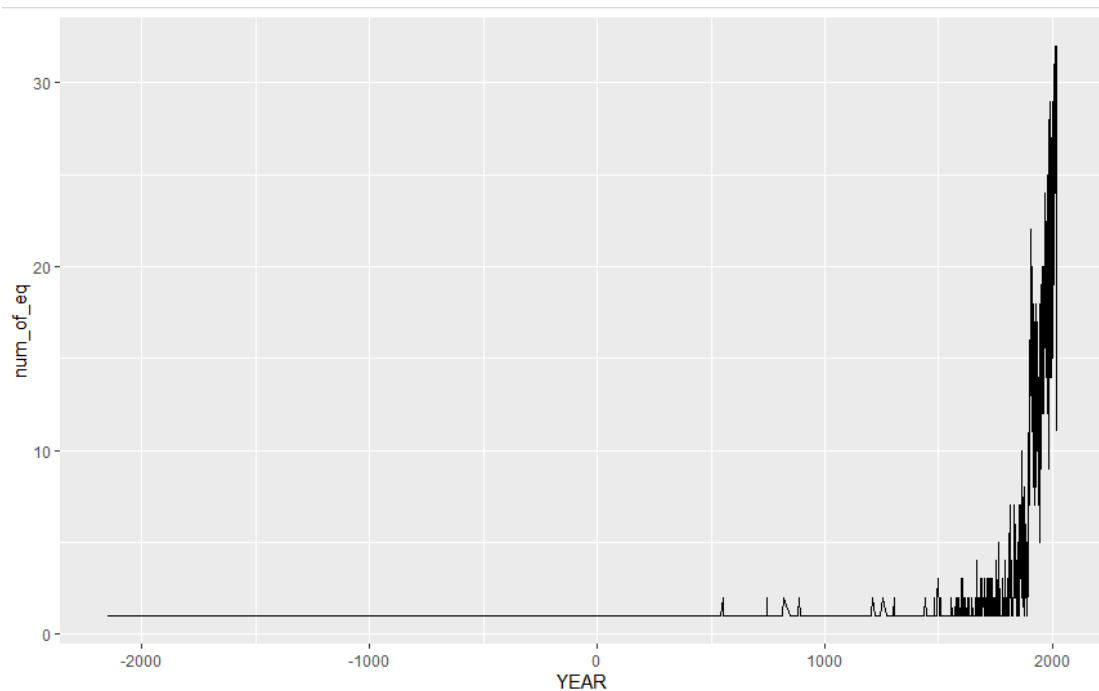


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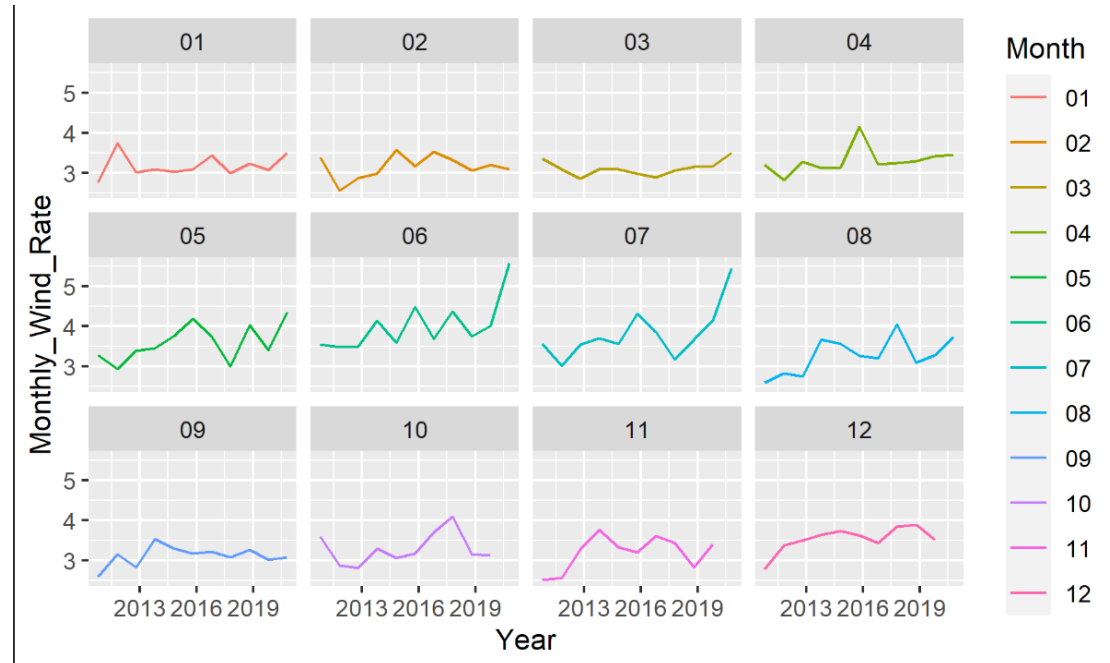
The first question is mainly based on the contents of the previous class, focusing on the analysis of the problems in 1.3, and calculating the total number of earthquakes with $m \geq 6.0$ each year in the world (using column Eq_Primary as the magnitude), and then plot the time series. From the map drawn, we can see that the number of earthquakes with $m \geq 6.0$ has increased significantly, and the figure shows a steep increase trend. With the progress of science and technology, we can detect more and more earthquakes and grade them.



In 1.4, the for statement is used to iterate the city output data, and the results are reported in descending order.

```
# A tibble: 162 x 5
  Country eq_of_country year month day
  <chr>    <int>    <int> <int> <int>
1 CHINA      606  1668     7    25
2 JAPAN      408  2011     3    11
3 INDONESIA  394  2004    12    26
4 IRAN       381   856    12    22
5 TURKEY     329  1912     8     9
6 TURKEY     329  1916     1    24
7 ITALY      326  1915     1    13
8 USA        268  1964     3    28
9 GREECE     264   365     7    21
10 GREECE     264  1303     8     8
# ... with 152 more rows
> |
```

In the second question, the monthly average wind speed is drawn as a function of the observation time, and the monthly average wind speed in the past 10 years has not changed too much. However, it can be seen from the figure that there is a time period in June and July when the wind speed increases significantly. Generally speaking, the wind speed does not change much every month.



The data used in the third question is provided by Li Yuan, which can be rewritten by using tidyr, dplyr and ggplot2 package.

