Project 2 - AIRPOL

Air Pollution

It is known that common airborne pollutants can have negative effects in the general health of citizens. In the short term, the presence of pollutants can yield to increasing risk of respiratory problems and culminate in long-term effects on the pulmonary function.

In order to assess the short-term implications of the presence of pollutants in the air, data on hospital admissions for respiratory diseases as well as daily average 24-hour concentrations of common pollutants in an asian city were gathered and compiled in the `pollution.csv` dataset.

The file contains information on the following variables:

- `resp`: Daily hospital admissions for respiratory diseases.
- `no2` : Average daily (24h) concentration of nitrogen dioxide NO_2.
- `so2` : Average daily (24h) concentration of sulphur dioxide SO_2.
- `rsp` : Average daily (24h) concentration of respirable suspended particules.
- `o3` : Average concentration of O_3.
- `temp` : Average daily temperature (in degrees Celsius).
- `hum` : Average humidity rate.
- Variables related to the date at which the observations were taken, namely the `day`, `month`, `year` and the weekday `wday`.

We would like to model the effect of the pollutants and the meteorological conditions on the number of hospital admissions.

Report:

Describe your modelling approach in detail. Your report should contain R outputs (without comment), but with systematic references from the text. It has to be at most 8 pages long, with at least 10 pt font.