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Find a set of time series data from a real-world situation of interest to you. Read some background on the situation and why and how the time series data are collected. Carry out a full analysis including model building, inference, and a simulation appropriate to the situation. On this you will write a report with the following parts.

1. **Introduction**. The real situation giving rise to the time series data why it is of interest
2. **Methods**. Describe the methods and models you use.
3. **Results**. Models chosen, inference results, simulation of the time series process based on models identified and parameter estimates.
4. **Discussion**. The meaning of the results in terms of the real situation
5. **References**. List sources you use and where your data come from.

Maximum length of report: 4 pages. Figures, references, and R code can be attached in addition. 12 point type one and one half or double spaced.

Grading is based on (1) how interesting, imaginative, and original is the chosen topic, and how the simulation population is obtained or constructed. (2) How well explained and clearly written is it. (3) How relevant are the time series models and methods to the situation. (4) Suitability or correctness of methods and calculations.

The project will count as 10% of the course grade, replacing that much of the midterm or final, whichever benefits you more.