Problem
The number of FAIR plan policies written and renewed in “city A” by zip code for the month of some periods was recorded. The FAIR plan was offered by the “city A” as a default policy to homeowners who had been rejected by the voluntary market. Information on other variables that might affect insurance writing were also collected at zip code level. The variables are

- **race**: racial composition in percentage of minority
- **fire**: fires per 100 housing unit
- **theft**: theft per 1000 population
- **age**: percentage of housing units built before certain year.
- **involact**: new FAIR plan policies and renewals per 100 housing units
- **income**: median family income in thousands of dollars:
- **side**: North or South Side of “City A”

The client would like to know what variables affect the number of FAIR plan policies and renewals. As a statistician, you propose the best two models: one for the best fitting model and the other for the best prediction model. Describe why these two models are the best two ones. You also make an inference for your parameters in your proposed models and interpret them.

Instruction:

- You should make written report including introduction, model/methods, result, conclusion/discussion, and appendix.
  - Introduction: you explain about the summary of data and give the goal of data analysis
  - Model/Methods: you explain how you find your best two models
  - Result: you summarize your results. If you need, you can use table or figure
  - Conclusion/discussion: you summarize and discuss about your finding.
  - Appendix: you attach your code in appendix.

- Your written report should be submitted on the deadline