Due date: Wednesday, 1/18, at the beginning of class. Hand in:

1. **One typed writeup (details below):**

2. **Attached should be an appendix with a list of mathematical structures and definitions that you do not know.**

The writeup should address the generic OR method from the first lecture for each of the three articles read for the discussion on 1/13. Below, I outline what the writeup should address for each of the four steps. In addition, you are to write a list of mathematical structures the articles reference (e.g., knapsack constraints) that you do not know the definition to.

1. **Model formulation & building**
   (a) Discussing problem with decision makers
   (b) Gathering data
   (c) Abstracting into a mathematical model

**Points to address in your writeup:**

- Describe the situation prior to the modeling effort.
- Describe the objective(s) the authors identify.
- Describe the decisions the authors identify.
- Describe the constraints the authors identify.
- Be sure to address which of the objective(s), decisions, and constraints the authors claim they are modeling.

**Do not rewrite the mathematical expressions of the model. You should not have any algebraic expressions in your writeup.**

2. **Analysis of the model**
   (a) Can the model be solved?
   (b) How is uncertainty being taken into account?
   (c) What are the results of the model?

**Points to address in your writeup**

- What assumptions are the authors making in their model?
- How are they dealing with data uncertainty?
- What method(s) do they claim to use to solve their model? How long do they claim their method(s) require?

3. **Interpreting and validating model results**
   (a) Are the results meaningful to the decision maker?
   (b) What are the strengths and weaknesses of the model?
   (c) How can we improve the current model?

**Points to address in your writeup**

- Describe the feedback they received from the decision maker?
- What do they state as the strengths and weaknesses of the model?
- Do they describe any future directions? If so, what?

4. **Implementation: practice versus theory**

1
(a) Are the computations performed efficiently with respect to the decision maker’s needs and resources?
(b) Are the results in a form that are useful to the decision maker?

Points to address in your writeup

- How do the authors implement the model for the decision maker?
- How do they describe the model being used?
- What are the claimed outcomes of their work?