Learning Objectives: Argumentation
APPM 4720/5720 Philosophy of Statistics

After the unit on logic, students should be able to:

1. Fundamentals of Logic
   (a) Define the following terms: argument, claim/proposition, premise, conclusion, deductive reasoning, inductive reasoning, validity, invalidity, strong argument, weak argument.
   (b) Distinguish between a deductive argument and an inductive argument.
   (c) Distinguish between a deductively valid argument and an invalid argument.

2. Problem of Induction
   (a) Articulate the Past-Future Principle.
   (b) Describe the problem of induction.
   (c) Describe how the Past-Future Principle plays a role in the problem of induction.
   (d) Evaluate the extent to which statistics (either Bayesian or frequentist) is a solution to the problem of induction (this is an ongoing learning objective!).