

PORTFOLIO

Bayesian Data Analysis (MA483)

Directions

Respond to each of the prompts below; please type directly in this document, inserting screen shots when necessary. There are no length requirements for each response; however, your responses should be thoughtful and honest. This document will serve as the basis for a one-on-one meeting with the instructor to process your experience in the course.

Engagement with Material

How many homework assignments did you complete by the deadline?

Approximately how many hours, during a typical week, did you devote to the course outside of class (including reading, assignments, videos, etc.)?

Objectives

The course syllabus stated ten learning objectives for the course (stated below). Read over each of these, then answer the questions that follow.

(A) Given a research goal, **identify** the parameter(s) of interest and, if applicable, **formulate** the goal as measurable statements about the parameter(s) of interest.

(B) **Describe** the importance of considering data collection when interpreting the results of a study. Specifically, **determine** whether it is reasonable that a sample is representative of the underlying population and **justify** your rationale.

(C) **Construct** and **interpret** graphical and numerical summaries of data to address a research goal.

(D) Given a description of the data generating process, **construct** a probability model that represents that process as a function of unknown parameters.

(E) Given a question of interest, **construct** a probability distribution that captures the information on the parameter prior to conducting the study, and use the data to **update** the information on the parameter.

(F) **Comment** on the adequacy of a statistical method for addressing a given question of interest by **assessing** the assumptions underlying the method.

(G) Given a posterior distribution, **summarize** the uncertainty in the parameter of interest and **interpret** the resulting output in context of the research question.

(H) **Identify** the value of statistical methodology in the advancement of science as well as **recognize** its limitations.

(I) Clearly **communicate** an analysis and its implications in written format.

(J) **Describe** the role of probability theory in the Bayesian framework for making inference on a population and **appreciate** the use of probability for capturing uncertainty about a parameter and the use of data to inform that uncertainty.

Use the following table to classify your perceived mastery of each of the objectives A-J.

Objective	Continue to Struggle	Able to Meet with Guidance from Instructor	Consistently Able to Meet without Guidance
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			

Which of the above objectives was the most challenging to you during the course? Why?

Objectives D, E, F, and G distinguish this course from other statistics courses on campus. For each of these four objectives, provide some evidence to justify your above classification; this could include example(s) of initial submission(s) on previous homework or exam question(s) which required no revision; or example(s) of revision(s) to question(s) which demonstrates growth.

Reflection

Suppose a student were just beginning this course; what advice would you give them for being successful?

What was a core concept you learned in this course that you hope you remember 5 years from now?

How will the topics covered in this course be beneficial to you in the future?

Assessment

What grade do you feel adequately reflects your learning in the course and your progress toward mastery of the course objectives?

Explain how you arrived at the above grade.