Introducing Bayesian Statistical Analysis into Your Teaching

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Workshop materials available at: https://github.com/monika76five/eCOTS2022_workshop

Workshop Goal

To provide resources for incorporating aspects of Bayesian statistics in your teaching at introductory, intermediate, and advanced undergraduate levels.

Workshop Goal is NOT

- To teach you Bayesian statistics
  - Though activities assume minimal background
- To cover all of Bayesian statistics
  - Only certain aspects
- To cover Bayesian course design
  - How to incorporate Bayesian in existing courses
- To advocate for inclusion of Bayesian
  - But we’re happy to discuss

Workshop Goal

To provide resources for incorporating aspects of Bayesian statistics in your teaching at introductory, intermediate, and advanced undergraduate levels.

Introductory: usual algebra-based first course in statistics, with no previous probability background

Four 50-Minute Activities

Session 1 (11:00-1:00): Intro

1. Introduction to Bayesian Reasoning
2. Bayesian Inference and Prediction

Session 2 (1:30-3:30): Intermediate/Advanced

3. Bayesian Regressions
4. Bayesian Hierarchical Models

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Schedule for Each Activity

1. Brief introduction
2. 30 minutes for break out group work
   - Monika and Kevin will circulate
3. Back to large group
4. Brief wrap up
5. 10 minutes for large group Q & A
   - Focus on questions specific to the activity

General Questions and Discussion

1. End of morning session (~12:45)
2. End of afternoon session (~3:10)

Download Materials

- https://github.com/monika76five/eCOTS2022_workshop
- Code > Download ZIP
- Unzip downloaded folder and navigate to Rmd and data files
- Start with ECOTS2022-Bayes-Activity1 HTML