

The New School for Social Research  
Advanced Econometrics 1  
Fall 2017  
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### **Assignment 8**

Due Dec 4 (Mon) 6:00 pm

1. Gaussian Process (Gelman, Adv. Stat BDA, Fall 2016): The following [link](#) is the 2004 National Annenberg Election Survey dataset that contains survey information on the attitude on three gay-related questions, 1) their position on the constitutional amendment banning same-sex marriage and 2) a state law allowing same-sex marriage, and 3) whether the respondent knows any gay people.
  - (a) Group ages into 5-year bins: 18-22, 23-27, 28-32, ... and label these as ages 20, 25, 30, ...
  - (b) Using Stan, fit a Gaussian Process model to estimate the percentage of people in the population who believe they know someone gay as a function of age and sex.
  - (c) Graph your inference (including posterior uncertainty) along with the data.