

Titanic Bayes Analysis

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1 Titanic Causal Model

This project aims to estimate the effect of Age, Class, and Sex on the survival chance of the Titanic.

1.1 Data description

The Titanic dataset is provided by the `causaldata` package and contains 2201 observations. Variables include Age, Sex, Class, and Survival. Age is binary: 1 = child, 2 = adult. Sex is binary: 0 = woman, 1 = man. Class has 4 categories (1-4). Survival is binary: 0 = not survived, 1 = survived.

2 Causal Models

The first causal model that aims to determine the direct effect of age on the survival chance is the following:

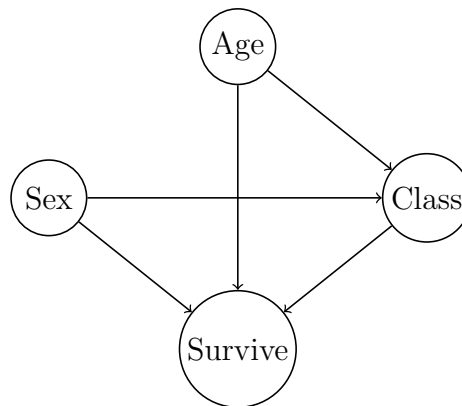


Figure 1: Causal Model to estimate the direct effect of Age on Survival chance

Biasing paths are open. Minimal sufficient adjustment sets for estimating the direct effect of Age on Survive include stratification by Class and Sex

The second Causal Model aims to determine the direct effect of Class on Survival in this case the minimal adjustment sets for estimating the direct effect of Class in Survival include stratification by Age and Sex

The third Causal Model aims to determine the direct effect of Sex on Survival and the minimal adjustment set is stratification by Class and Age

3 Statistical Model