CS-GY 6053 Final Project - Proposal

Group members:

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Question:

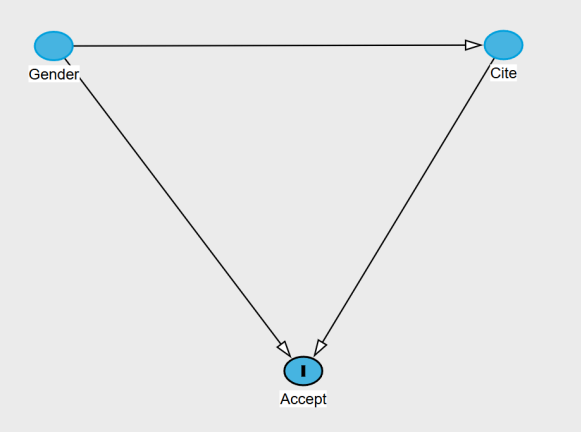
Through quantitative analysis of the ICLR 2017-2022 dataset, we aim to identify the role of gender and citations in acceptance decisions and reveal possible systematic biases. This research will not only provide valuable insights for the academic community, but also provide a basis for the formulation of relevant policies to promote a more fair review process.

Dataset Description:

The ICLR 2017-2022 dataset provides open-access data on the peer-review process for papers submitted to the International Conference on Learning Representations (ICLR) over these years. This dataset includes detailed information on authors, institutions, submissions, reviews, and decisions, which serves as a valuable resource for examining patterns and potential biases in the review and acceptance process within a leading AI and machine learning conference.

Causal Model (with DAG):

- Gender of authors: Contains male, female and unspecified.
- Citations of authors: Number of author's Google scholar citations.
- Acceptance of papers: Contains 5 states: Oral, Spotlight, Poster, Workshop and Reject. (Indicates a high to low level of acceptance)



Statistical Model:

$$Acceptance \sim OrderedLogit(\varphi_i, \alpha)$$

$$\varphi_i = \beta_{C,G[i]} \times C$$

$$\beta_{C,G[i]} \sim Normal(0,\ 1)$$

$$\alpha_k \sim Normal(0, 1)$$