Behavioral causal inference model technical report

For outlining the specific modeling steps that have been taken for translating the causal inference model of multisensory perception (initially proposed by kording et al 2007) into a primate saccade paradigm.

**Introduction**

-contrast with integration condition

- set up CI models as a useful step forward in understanding multisensory perception and perceptual decision making

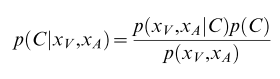
- motivate use of monkeys for addressing this question

- benefits of using saccades as a report

**Model description (do this first)**

* Complete technical description of the model, probably including the specific changes I have made so far
* Should be able to recreate the existing model from this section

The causal inference model implements a form of Bayesian causal inference that estimates the likelihood that two stimuli originate in the same spatial location, given a separate estimate of each modality. This has the structure:



Where C =1 reflects a common cause and C=2 reflects separate causes.

**Deviations from previous modeling (do this second)**

* Monkeys and saccades both introduce specific challenges, what are they?
* Benefits and difficulties of using saccades as a report, especially the one vs two saccade accuracy thing
* Description of specific changes from previous model and why they were made/how they help

List of changes:

**Results**

* Does the model capture behavior well
* How does the model compare with other possibilities
* What are some things we can pull out from looking at the model fits (accuracy, bias, priors)
* How do monkeys and humans compare in this paradigm
* What does this tell us about CI as a strategy used in the brain

**Conclusion**