**Meeting attendees.**

Xia Jiang,  Garrett Barber

**Meeting time**

2:00 – 3:00 pm, 2/22/2023

**Meeting agenda (an addition meeting in response to an email question).**

1. Review the progress of the work assigned last week. Made good progress developing the web version of both iRCT and CausalLearning.
2. Tested the web.py for both CausalLearning and iRCT.
3. Discuss issues encountered during the week.
4. Made comments based on in-meeting testing.
5. Work assignment.

**Research Design**

iRCT – an intelligent pseudo randomized controlled trial.

1. Implement the simple matching estimator method as described in Jiang’s slide (AboutDID.pptx).
2. Created a simple test dataset using the same example Jiang used in her slides.
3. Test 1) with the dataset created in 2).
4. Include a transform function in our iRCT (See the MBIL package) that can convert all the covariates into one variable (such as the X in the example).
5. Develop a function that convert multi-value variables into a binary variable and include it in the iRCT pacakge.
6. Apply iRCT to our LSM-15year.
7. Identify more interesting “treatment” variables such as Menopausal status in our LSM-15 year, use method developed in 5) to convert them into binary each respectively, if they are non-binary. Then apply iRCT each respectively.
8. Compare what you learned from using iRCT with what you can learn from our MBIL methods, and from the other causal learning methods that we have access to.
9. In terms of the completed causal network, such as the you (Garrett) learned using FCI with our LSM-15year, you can just retrieve the direct causes to the target variable (BCM) and compare with our MBIL and iRCT.

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**Progress made in the past week.**

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See the follow warnings from the testing:  
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user\_guide/indexing.html#returning-a-view-versus-a-copy  
 self.obj[key] = value  
/Applications/anaconda3/lib/python3.7/site-packages/pandas/core/indexing.py:1676: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead  
  
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user\_guide/indexing.html#returning-a-view-versus-a-copy  
 self.\_setitem\_single\_column(ilocs[0], value, pi)  
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**Ongoing tasks that cover more than a week**

Developing iRCT and our CausalLearning package.

**Specific tasks for the coming week (the original task assignment for two weeks)**

1. Add requirements.txt for causal learn and iRCT package for additional python packages
2. Add feature for iRCT to help users convert their dataset into numerical datasets.
3. Once the user uploaded a dataset, we won’t delete it until the user finishes all tests.
4. Make PC output a DAG (currently the output is the adjacency matrices.
5. There were bugs/errors found when Dr. Jiang did her tests on GES. Need to fix all possible error. Think ahead of error handling. Our programs need to be error-proof, or at least errors should be caught and explained.
6. Move the web.py for both iRCT and CausalLearning to our AWS web sites.

**Less urgent tasks**