## User Manual for CRE (Causal Rule Explorer)

- 1. Start CRE by double-clicking on the CRE.jar file. Note that Java SE runtime environment (jre7 or later) needs to be installed on the computer before running CRE.
- 2. At the very top of the CRE window, there is a row of tabs. When CRE is first started, only the "File" tab is active and the others are greyed out, which is shown in Figure 1.

Ce Causal Rule Explorer		×
File CDT CR-CS CR-PA		
Open file ⑦		
Status:		Log

Figure 1

3. After selecting an input data set, the other tabs become active, if the corresponding algorithms can handle this data set. (Click the question mark next to "Open file" button for more details.)

CE Causal Rule Explorer		—		×
File CDT CR-CS CR-PA				
Options ⑦	Output			
Causal discovery	Results			
○ Classification				
Parameters ()				
height 5				
pruned true 🗸				
Start Stop				
Result list				
Status: 2 algorithms can not handle this file [CP-	-CS: Current data file: D:\Documents\car csvRer CR-CS and	v C4 5 4	ormet	Log

Figure 2

Now we use the CDT algorithm as an example to demonstrate how to use CRE for causal discovery.

- 1. Open the input file. Double-click the "Open file..." button and select an input file. See Figure 1.
- 2. Once the tabs are active, click them to select a specific algorithm, i.e. CDT in this example. See Figure 2.
- 3. Configure the options and parameters on the left-top panel. Click question mark for help.
- 4. Click the "Start" button to run the algorithm.
- 5. Obtain the results. The results are displayed with both text (Figure 3) and diagram (Figure 4).



Figure 3



6. The history results are on the left-bottom panel. Click the item and results will show on the right panel.