

Installation Instructions of AACR MCC Calculator

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Automated Analysis of Constructed Response Research Group at CREATE for STEM Institute

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June 2020

Version 1

(Note: diagrams created with online tool <https://app.diagrams.net/>)

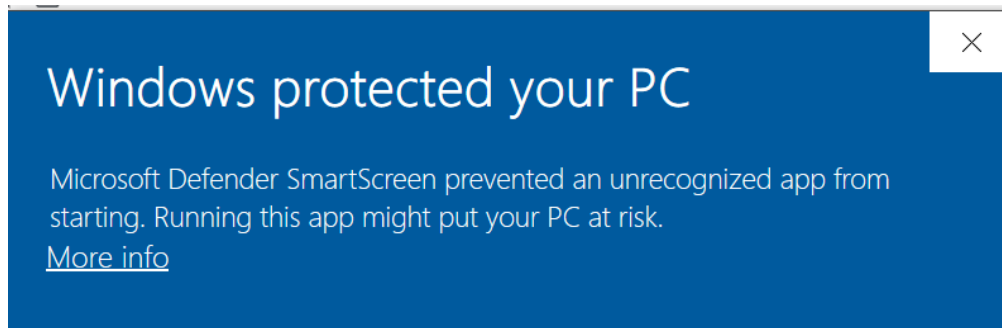
Acknowledgements:

This material is based upon work supported by the National Science Foundation (Grants 1323162 and 1347740). Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the supporting agencies.

Installation Instructions (Windows only)

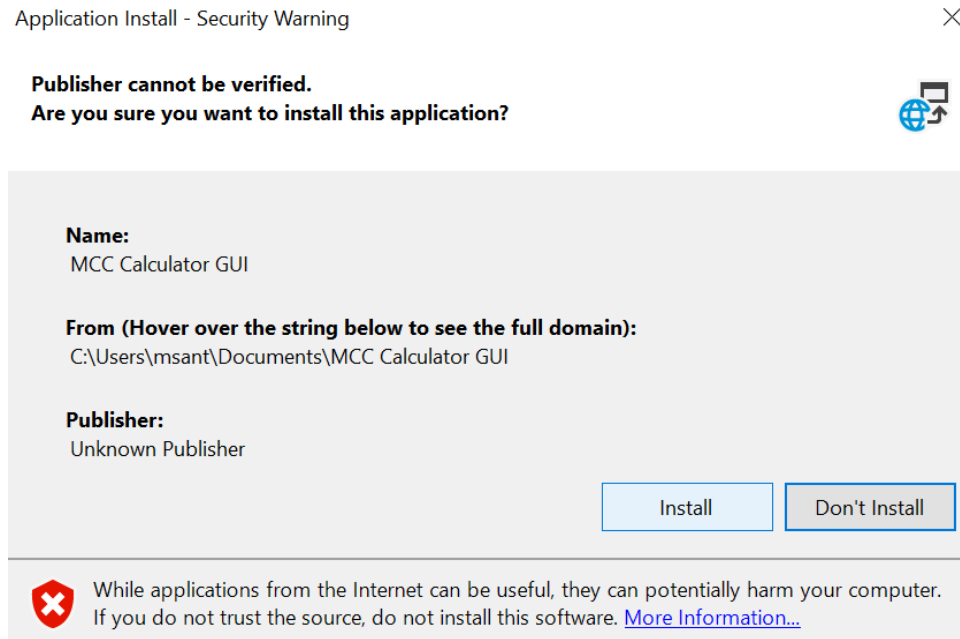
This is a simple app that calculates Matthews Correlation Coefficient based on the user's input values (true positives, true negatives, false positives, false negatives).

- 1) Download the zip file "AACR MCC Calculator.zip".
- 2) Right-click on the .zip and choose "Extract All".
- 3) Double-click on the "AACR MCC Calculator" folder. Find "setup.exe" and double-click it to run"
- 4) If Windows shows you this alert, click on "More info"



- 5) ... then click on "Run anyway":

6) Click on “Install”:



7) If you now go to “Start”, you will find the app installed in your computer. Click on it.

8) If Windows blocks the app, please click on “Run Anyway.”

9) The program will ask you to enter the true positives, true negatives, false positives, and false negatives. The result will be shown in the last textbox:

MCC Calculator

Enter the number of true positives (TP): 90

Enter the number of true negatives (TN): 88

Enter the number of false positives (FP): 70

Enter the number of false negatives (FN): 20

Calculate MCC

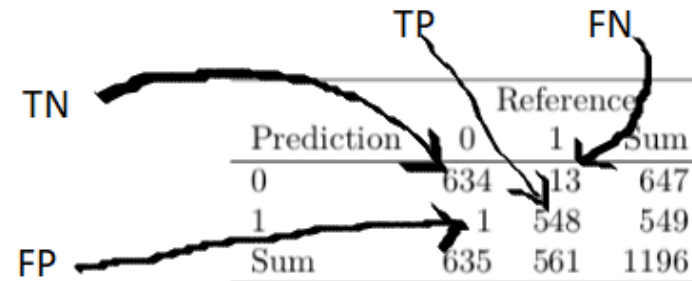
Matthew's Correlation Coefficient: 0.3762277632478

Clear textboxes

"Clear textboxes" button will clear text in all textboxes including the result box.

TP, FP, TN, and FN can be found in the AACR confirmatory analysis confusion matrix PDF output. Example:

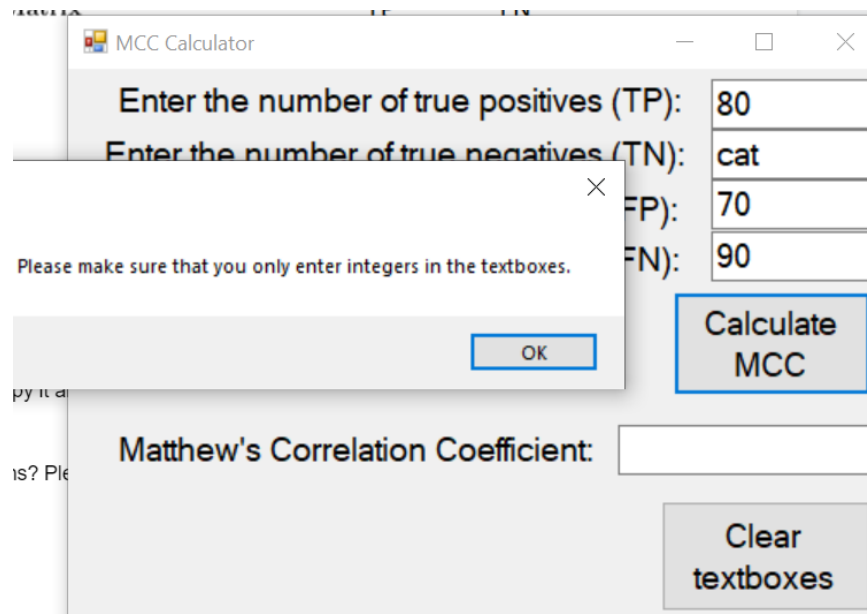
Confusion Matrix



The confusion matrix is a 2x2 table with 'Prediction' on the y-axis and 'Reference' on the x-axis. The values are: 634 (0,0), 13 (0,1), 1 (1,0), and 548 (1,1). Handwritten arrows indicate: TP points to the 13 value, FN points to the 1 value, TN points to the 634 value, and FP points to the 1 value.

	Prediction	0	1	Sum
0		634	13	647
1		1	548	549
Sum		635	561	1196

Note: if you input non-integers or leave a blank, it will remind you to only enter integers. Try again:



The screenshot shows a window titled 'MCC Calculator'. It has four input fields: 'Enter the number of true positives (TP):' with value 80, 'Enter the number of true negatives (TN):' with value 'cat', 'FP:' with value 70, and 'FN:' with value 90. A message box is overlaid on the window with the text 'Please make sure that you only enter integers in the textboxes.' and an 'OK' button. At the bottom of the window, there is a 'Calculate MCC' button and a 'Clear textboxes' button. The output field 'Matthew's Correlation Coefficient:' is empty.