Data\_To\_Genarte\_BN1 = Truth Table of the Starting Boolean Network that provides the synthetic data

BN1 Diagram = State transition Diagram of the Starting Boolean Network

BN2\_1path Diagram = State Transition Diagram of the BN with the highest similarity score inferred based on single path transitions

BN2\_2path Diagram = State Transition Diagram of the BN with the highest similarity score inferred based on two path transitions

BN2\_3path Diagram = State Transition Diagram of the BN with the highest similarity score inferred based on three path transitions

R\_max\_1path = Maximum similarity score for inferences based on single path transitions

R\_max\_2path = Maximum similarity score for inferences based on two path transitions

R\_max\_3path = Maximum similarity score for inferences based on three path transitions

R\_mean\_1path\_4transitions = Mean similarity score for inferences based on single paths containing at least 4 transitions

 R\_mean\_2path\_4transitions = Mean similarity score for inferences based on two different paths each containing at least 4 transitions

R\_mean\_3path\_4transitions = Mean similarity score for inferences based on three different paths each containing at least 4 transitions

R\_mean\_1path\_5transitions = Mean similarity score for inferences based on single paths containing at least 5 transitions

R\_mean\_2path\_5transitions = Mean similarity score for inferences based on two different paths containing at least 5 transitions

R\_mean\_3path\_5transitions = Mean similarity score for inferences based on three different paths each containing at least 5 transitions

Any NaN values refer to cases where the constraints on the transitions were not feasible for that Boolean Network.