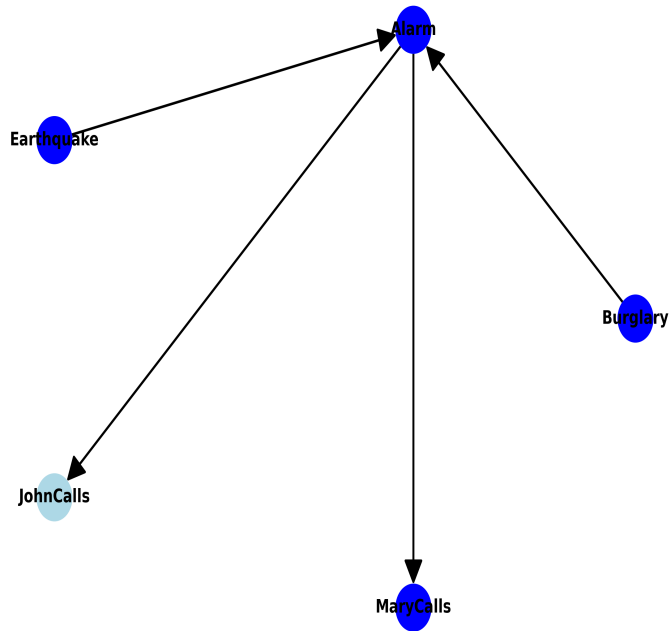
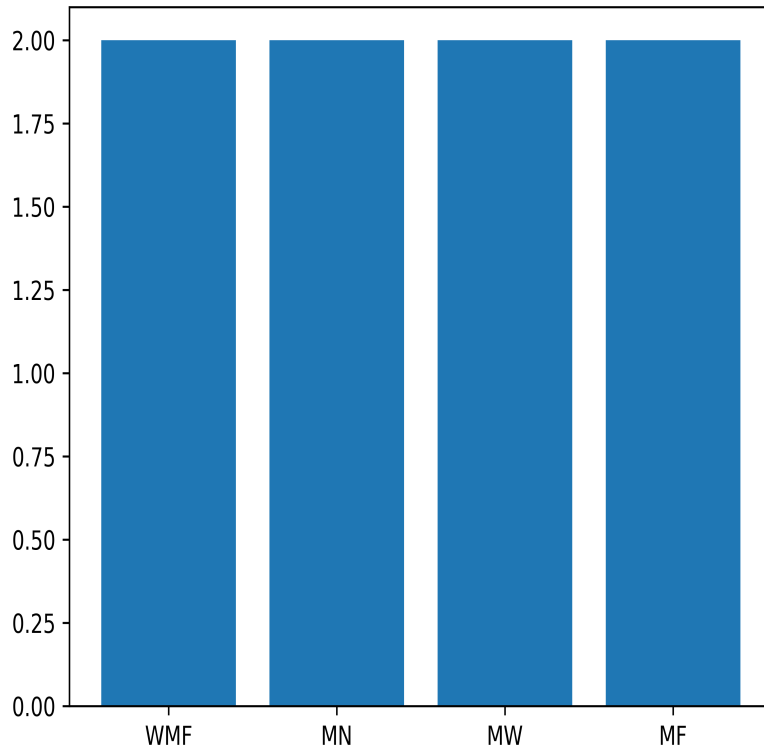


Variable Elimination - reasoning

Reduced model for variable elimination (optimization)



Comparison of heuristics for selecting variable elimination ordering



La heurística de eliminación óptima es WeightedMinFill

Factors of the reduced model

+-----+-----+					
Burglary(0)	0.999				
+-----+-----+					
Burglary(1)	0.001				
+-----+-----+					
Burglary	Burglary(0)	Burglary(0)	Burglary(1)	Burglary(1)	
+-----+-----+					
Earthquake	Earthquake(0)	Earthquake(1)	Earthquake(0)	Earthquake(1)	
+-----+-----+					
Alarm(0)	0.999	0.71	0.06	0.05	
+-----+-----+					
Alarm(1)	0.001	0.29	0.94	0.95	
+-----+-----+					
+-----+-----+					
Earthquake(0)	0.998				
+-----+-----+					
Earthquake(1)	0.002				
+-----+-----+					
Alarm	Alarm(0)	Alarm(1)			
+-----+-----+					
MaryCalls(0)	0.1	0.7			
+-----+-----+					
MaryCalls(1)	0.9	0.3			
+-----+-----+					

Elimination order: Earthquake, Alarm

Variable a eliminar Earthquake
Factores que participan

+-----+-----+				
Earthquake		phi(Earthquake)		
+=====+				
Earthquake(0)		0.9980		
+-----+-----+				
Earthquake(1)		0.0020		
+-----+-----+				
Alarm	Burglary	Earthquake		phi(Alarm,Burglary,Earthquake)
+=====+				
Alarm(0)	Burglary(0)	Earthquake(0)		0.9990
+-----+-----+				
Alarm(0)	Burglary(0)	Earthquake(1)		0.7100
+-----+-----+				
Alarm(0)	Burglary(1)	Earthquake(0)		0.0600
+-----+-----+				
Alarm(0)	Burglary(1)	Earthquake(1)		0.0500
+-----+-----+				
Alarm(1)	Burglary(0)	Earthquake(0)		0.0010
+-----+-----+				
Alarm(1)	Burglary(0)	Earthquake(1)		0.2900
+-----+-----+				
Alarm(1)	Burglary(1)	Earthquake(0)		0.9400
+-----+-----+				
Alarm(1)	Burglary(1)	Earthquake(1)		0.9500
+-----+-----+				

Phi

Alarm	Burglary	phi(Alarm,Burglary)
Alarm(0)	Burglary(0)	0.9984
Alarm(0)	Burglary(1)	0.0600
Alarm(1)	Burglary(0)	0.0016
Alarm(1)	Burglary(1)	0.9400

Variable a eliminar Alarm
Factores que participan

Alarm	phi(Alarm)
Alarm(0)	0.9000
Alarm(1)	0.3000

Alarm	Burglary	phi(Alarm,Burglary)
Alarm(0)	Burglary(0)	0.9984
Alarm(0)	Burglary(1)	0.0600
Alarm(1)	Burglary(0)	0.0016
Alarm(1)	Burglary(1)	0.9400

Phi

Burglary	phi(Burglary)
Burglary(0)	0.8991
Burglary(1)	0.3360

Final distribution

Burglary	phi(Burglary)
Burglary(0)	0.9996
Burglary(1)	0.0004