

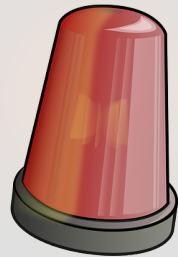
Example: thief & alarm



Model



Model



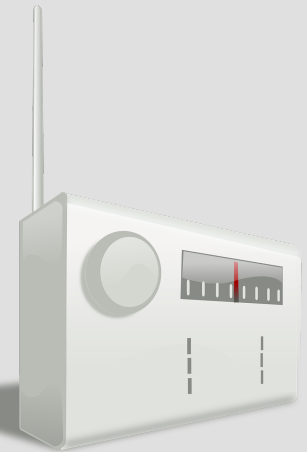
Model



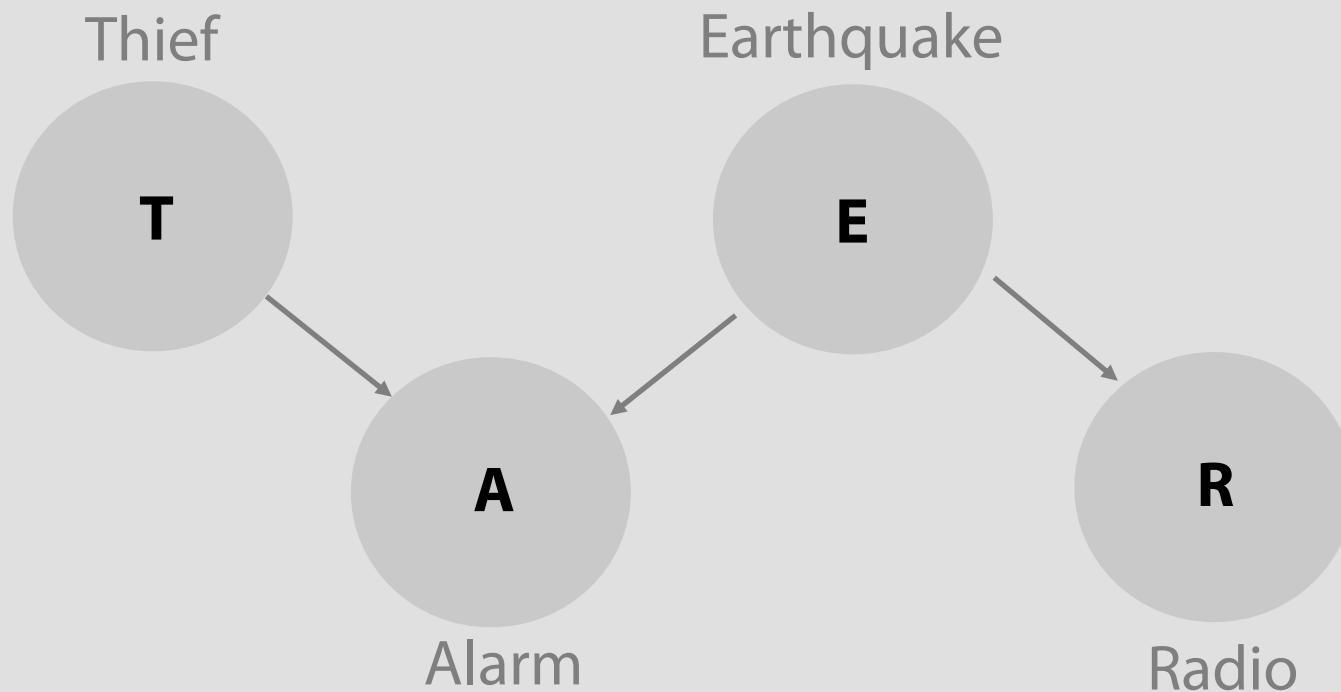
Model



Model



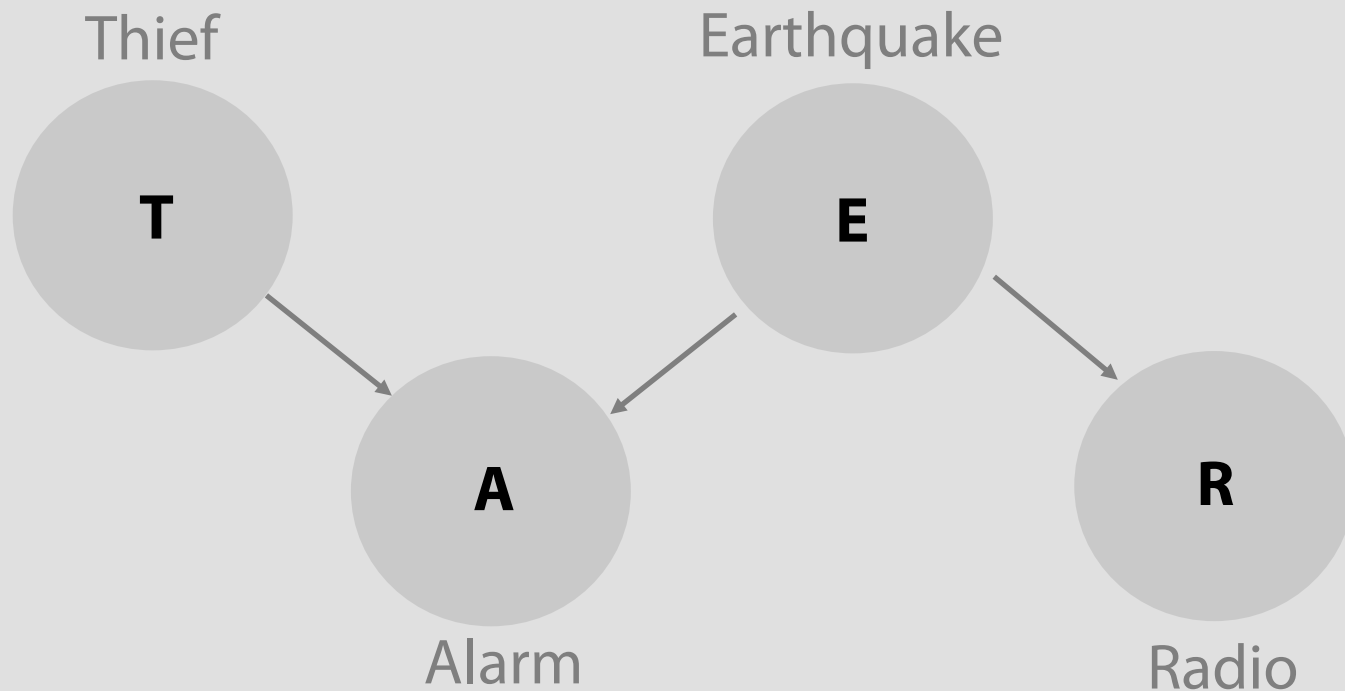
Model



$$P(T, A, E, R) =$$



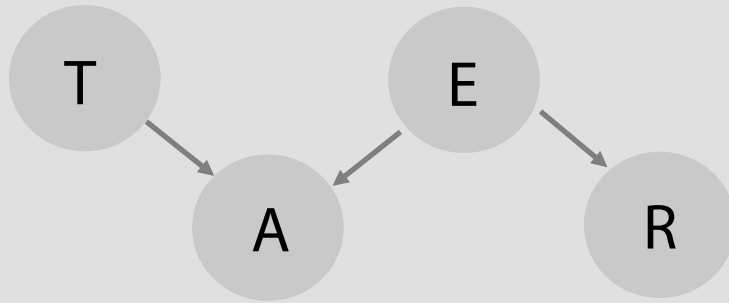
Model



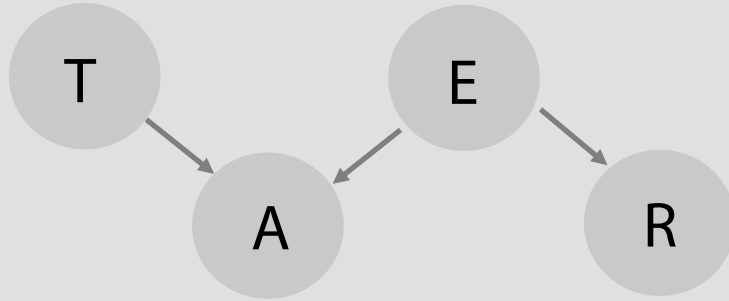
$$P(T, A, E, R) = P(T)P(E)P(A|T, E)P(R|E)$$



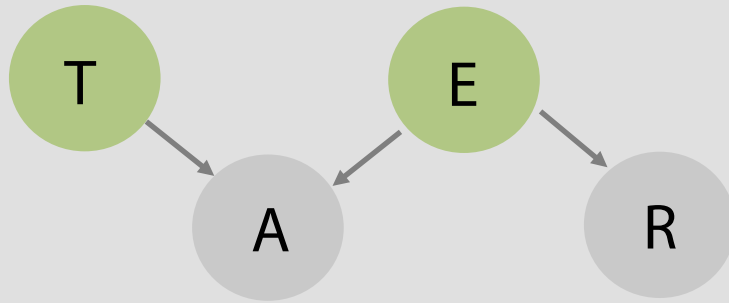
Distributions



Thief Earthquake



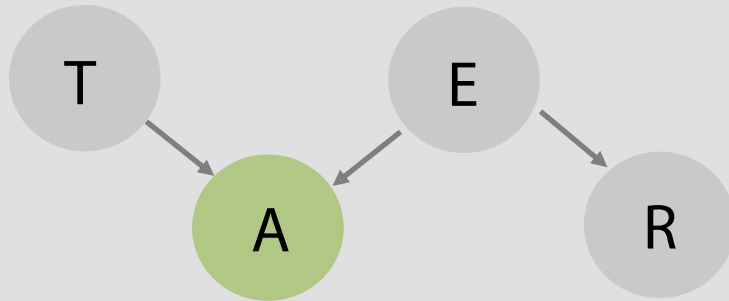
Distributions



Priors	
$P(T = 1)$	10^{-3}
$P(E = 1)$	10^{-2}



Distributions

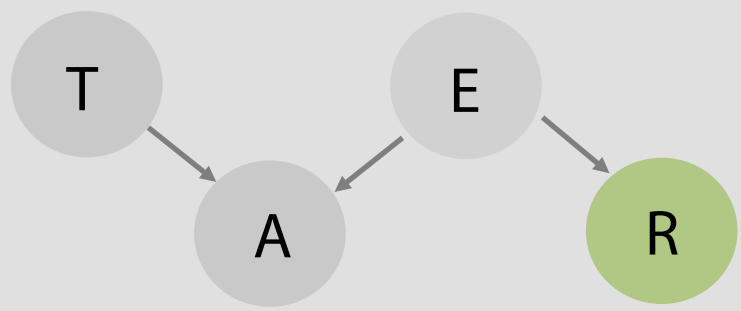


Priors	
$P(T = 1)$	10^{-3}
$P(E = 1)$	10^{-2}

$P(A = 1 T, E)$	$E = 0$	$E = 1$
$T = 0$	0	1/10
$T = 1$	1	1



Distributions



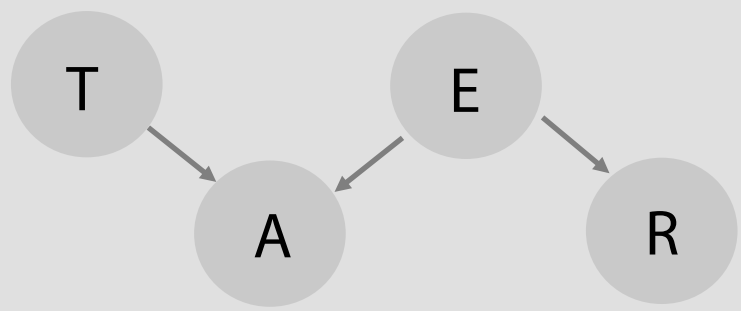
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$T = 0$	0	1/10
$T = 1$	1	1

$P(R E)$	
$E = 0$	0
$E = 1$	1/2



Distributions



Priors	
$P(T = 1)$	10^{-3}
$P(E = 1)$	10^{-2}

$P(A = 1 T, E)$	$E = 0$	$E = 1$
$T = 0$	0	1/10
$T = 1$	1	1

$P(R E)$	
$E = 0$	0
$E = 1$	1/2



<< Part on marker board >> (8 mins)



Correct model

