

conditional probability table file format

$$\text{target} = \{x_1, x_2, \dots, x_k\}, \quad \sum_{i=1}^k p(\text{target} = x_i) = 1$$

$$\text{parent}_i = \{x_{i1}, x_{i2}, \dots, x_{ik_i}\}, \quad \sum_{j=1}^{k_i} p(\text{parent}_i = x_{ij}) = 1$$

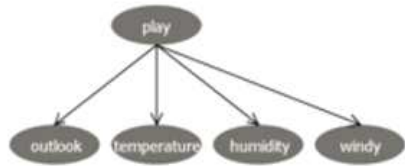
$$\sum_{i=1}^k p(\text{target} = x_i | \text{parents}) = 1$$

k : number of values of target node / k_i : number of values of i^{th} parent node / N : number of parent nodes

P(target)			
x_1	x_2	...	x_k
$p(\text{target}=x_1)$	$p(\text{target}=x_2)$	...	$p(\text{target}=x_k)$

P(target | parent_1, parent_2, ..., parent_N)						
parent_1	parent_2	...	parent_N	x_1	...	x_k
x_{11}	x_{21}	...	x_{N1}	$p(\text{target}=x_1 | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{N1})$	...	$p(\text{target}=x_k | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{N1})$
x_{11}	x_{21}	...	x_{N2}	$p(\text{target}=x_1 | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{N2})$	...	$p(\text{target}=x_k | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{N2})$
\vdots	\vdots		\vdots	\vdots		\vdots
x_{11}	x_{21}	...	x_{Nk_N}	$p(\text{target}=x_1 | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{Nk_N})$	...	$p(\text{target}=x_k | \text{parent}_1=x_{11}, \dots, \text{parent}_N=x_{Nk_N})$
\vdots	\vdots		\vdots	\vdots		\vdots
x_{1k_1}	x_{2k_2}	...	x_{Nk_N}	$p(\text{target}=x_1 | \text{parent}_1=x_{1k_1}, \dots, \text{parent}_N=x_{Nk_N})$	...	$p(\text{target}=x_k | \text{parent}_1=x_{1k_1}, \dots, \text{parent}_N=x_{Nk_N})$

예:



<p>2page cpt.txt</p> <p>P(play) yes no 0.625 0.375</p> <p>P(outlook | play) play sunny overcast rainy yes 0.25 0.417 0.333 no 0.5 0.125 0.375</p> <p>P(temperature | play) play hot cool mild yes 0.25 0.417 0.333 no 0.375 0.375 0.25</p> <p>P(humidity | play) play high normal yes 0.364 0.636 no 0.714 0.286</p> <p>P(windy | play) play true false yes 0.364 0.636 no 0.571 0.429</p>	<p>10page test.txt</p> <p>outlook =====</p>	<p>11page test.txt</p> <p>outlook =====</p> <p>windy</p>	<p>12page test.txt</p> <p>outlook =====</p> <p>humidity = high windy = false</p>
	<p>10page cpt_out.txt</p> <p>P(outlook) sunny overcast rainy 0.3437 0.3072 0.3489</p> <p>P(outlook | play) play sunny overcast rainy yes 0.25 0.4166 0.3333 no 0.5 0.125 0.375</p>	<p>11page cpt_out.txt</p> <p>P(outlook | windy) windy sunny overcast rainy true 0.3437 0.3072 0.3489 false 0.3437 0.3072 0.3489</p> <p>p(outlook | windy, play) play windy sunny overcast rainy yes true 0.25 0.4166 0.3333 yes false 0.25 0.4166 0.3333 no true 0.5 0.125 0.375 no false 0.5 0.125 0.375</p>	<p>12page cpt_out.txt</p> <p>P(outlook | humidity = high, windy = false) humidity windy sunny overcast rainy high false 0.3437 0.3072 0.3489</p> <p>P(outlook | humidity = high, windy = false, play) humidity windy play sunny overcast rainy high false yes 0.25 0.4166 0.3333 high false no 0.5 0.125 0.375</p>