



$$P' = \frac{\sum_i P'_i}{\sum_i 1}$$

$$P'_i = \frac{\sum_{j \neq i} P'_{ij}}{\sum_{j \neq i} 1}$$

$$P'_{ij} = \frac{\sum_{k \neq j \neq i} P'_{ijk}}{\sum_{k \neq j \neq i} 1}$$

$P = P(Y = 1)$ ,  $P'$  = estimate of  $P$

$P_i = P(Y = 1 | x_i = x'_i)$

$P_{ij} = P(Y = 1 | x_i = x'_i, x_j = x'_j)$

$P_{ijk} = P(Y = 1 | x_i = x'_i, x_j = x'_j, x_k = x'_k)$