

loop

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## Contents

Here is a possible polynomial in 4 variables  $x = (x_1, \dots, x_4)$

$w_1$  is also a vector with 6 components  $w_1 = 1/2, -1/3, +0.25, -1$

$w_2$  is something similar

Polynomial is  $(0.3(w_1\{x\} + w_2\{x\}))^2 - 0.75(w_3\{x\} + w_4\{x\})^2$

this is sparse not in monomials but in terms like  $w_1\{x\}$

this is a quadratic function on a binary tree