Input:

C: regularization parameter

tol: numerical tolerance

max_passes: max # of times to iterate over α's without changing

$(x^{(1)}, y^{(1)}), \ldots, (x^{(m)}, y^{(m)})$: training data

Output:

$\alpha \in \mathbb{R}^m$: Lagrange multipliers for solution

$b \in \mathbb{R}$: threshold for solution