```
function weighted_avg_prob = inf_weighted_prob(prob_vector)

  [temp N] = size(prob_vector);

  for i = 1 : N

    inf_vector(i) = -1*spec_log(prob_vector(i));

  endfor

  avg_inf = mean(inf_vector);
  var_vector = sqrt(((inf_vector - avg_inf).^2)) + 1;
  s_vector = var_vector; %this is here to allow for adjustments to the weights where
appropriate
  T = sum(s_vector);

  weighted_avg_prob = (1/T)*(s_vector*prob_vector');

endfunction
```