Haonan Hu

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2863545

1. Assume each iteration of a brute-force algorithm takes 0.1 sec, how long would it take to find the optimum solution for 8 features?

   N = 2^8 – 1 = 255

   255 * 0.1 = 25.5s

2. Let X = {a, b, c, d} and F = {a, b}
   a. Which sets of features will be evaluated next in a sequential forward selection (SFS)?

   {a, b, c}, {a, b, d}

   b. Which sets of features will be evaluated next in a sequential Backward selection (SBS)?

   {b}, {a}

3. In a Plus-l Minus-R selection (LRS), let X = {a, b, c, d}, F = {b, d}, L = 1, R = 3:
   a. Which sets of features will be evaluated in step R3?
   {d}, {b}
   b. What it the next step, after step R3?
   Next step is L1, depending on which of {d}, {b} left from R3. So, there are two cases:
   1. {d} left from R3: eval {d, a}, {d, b}, {d, c}

2. {b} left from R3: eval {b, a}, {b, c}, {b, d}

4. Let Y = {a, b, f, g}, X = h, Acc({a, b, f, g}) = 0.89, and Acc({a, b, f, g, h}) = 0.91 in a step 4 of a sequential floating backward selection (SFBS)

    a. What will Y be?

       Y = {a, b, f, g, h}

    b. What will the next step be?

       Step 3