Cross-validation algorithm that uses 90% of data for training and 10% for validation and repeats this 10 times.

Input: Data and all labels of data

Algorithm:

- Create values of C to optimize. For example C = {.0001, .001, .01, .1, 1, 10, 100}.
- Let error[c] = 0 for all c in C.
- For i = 0 to 9 do
    - Randomly select 90% of datapoints as training. Let the remaining be validation.
    - For each value of c in C do
        - Run classification algorithm on training set with parameter c
        - Obtain error e on validation set.
        - Update error[c] = error[c] + e
- Set error[c] = error[c]/10 for all c in C
- Output value of c with lowest error