

```
%Copyright Charles Davi
```

```
clear all  
clc
```

```
num_iterations = 250;  
current_max = 0;  
accuracy_matrix = [];
```

```
%calls prediction algorithm repeatedly to generate confidence curve  
for i = 1 : num_iterations
```

```
    i  
    tic;  
    [accuracy max_cluster_size] = tempfunction();  
    t(i) = toc;
```

```
    num_cols = size(accuracy_matrix,2);
```

```
    %if true, we increase the size of the accuracy matrix  
    if(max_cluster_size > current_max)
```

```
        %if it's not the first iteration, we need to pad the columns  
        if(i != 1)
```

```
            diff = max_cluster_size - current_max;  
            accuracy_matrix(:, num_cols + 1 : num_cols + diff) = -1*ones(i-1, diff);
```

```
        endif
```

```
        accuracy_matrix(i,:) = accuracy;  
        current_max = max_cluster_size;
```

```
    %if true, we pad the accuracy vector  
    elseif(max_cluster_size < current_max)
```

```
        diff = current_max - max_cluster_size;  
        temp = -1*ones(1, current_max + 1);  
        temp(1 : max_cluster_size + 1) = accuracy;
```

```
        accuracy_matrix(i,:) = temp;
```

```
    %otherwise, they're the same size  
    else
```

```
        accuracy_matrix(i,:) = accuracy;
```

```

endif

endfor

%calculates accuracy
for i = 1 : current_max

    temp_accuracy = accuracy_matrix(:,i);

    x = find(temp_accuracy == -1);
    temp_accuracy(x) = []; %deletes null entries

    x = isnan(temp_accuracy);
    temp_accuracy(x) = []; %deletes NaN entries

    final_accuracy_vector(i) = mean(temp_accuracy);

endfor

figure, plot(final_accuracy_vector)

raw_accuracy = final_accuracy_vector(1)
max_accuracy = max(final_accuracy_vector)

average_runtime = mean(t)

```