%Positive-Negative Table Generator

%TrueOP=True Optimal CP list

%TestOP=Optimal CP list that you want to test

%N=Number of Datapoints

%fuzziness=user defined integer value that represents the "error bound"

%NOTE: fuzziness will increase the Test Optimal CP list

function PosNeg\_table (TrueOP,TestOP,N,fuzziness)

%%%%Adjusting TestOP step

tempTestOP=[];

for fuzz=-fuzziness:fuzziness

tempTestOP=[tempTestOP fuzz+TestOP]; %#ok<AGROW>

end

for i=1:length(tempTestOP)

if tempTestOP(i)<1

tempTestOP(i)=1;

end

if tempTestOP(i)>N

tempTestOP(i)=N;

end

end

TestOP=unique(tempTestOP);

%%%%

%%%%Comparing Step

TP=0;

FP=0;

for i=1:length(TestOP)

check=0;

for j=1:length(TrueOP)

if TestOP(i)==TrueOP(j)

TP=TP+1;

check=1;

end

end

if check==0

FP=FP+1;

end

end

FN=length(TrueOP)-TP;

TN=N-TP-FP-FN;

%%%%

%%%%Table Generating Step

label=['True Positives False Positives'; 'False Negatives True Negatives'];

equal=['-';'-'];

results=num2str([TP FP;FN TN]);

liner=[' | ';' | '];

TITLE=['Fuzz factor of: ' num2str(fuzziness)];

disp(TITLE)

disp([liner label liner equal liner results liner])

%%%%