%-- 3/30/2016 12:23 PM --%

load('posts.csv');

memory

[user,sys]=memory

sys.SystemMemory

posts=downsample(posts,10);

preproc=preprocessor(posts);

preproc{1}

preproc{2}

preproc{3}

clear all

tf=[72,86,83,56];

ig=[74,92.3,84.4,59.65];

plot(tf,'.\*')

a=[1,2,3,4];

plot(tf,a,'.\*')

plot(tf,a,'-\*')

plot(a,tf,'-\*','LineWidth',3)

plot(a,tf,'-\*','k','LineWidth',3)

plot(a,tf,'k-\*','LineWidth',3)

hold on;

plot(a,ig,'r-\*','LineWidth',3)

grid on

legend('TF-IDF','Information gain')

save tf-idf

clear all

load fig\_hist.mat

hist(C2(:,1),10)

hist(X,10)

%-- 4/5/2016 12:42 PM --%

im1=imread('col.png');

im2=imread('sur.png');

im3=imfuse(im1,im2);

imshow(im3)

%-- 4/5/2016 8:41 PM --%

pos=xml2struct('Posts.xml');

size(pos)

pos

pos=pos.posts;

size(pos)

pos

pos=pos.row;

pos=pos(1:1000);

neg=xml2struct('Posts\_h.xml');

neg=neg.row;

neg=neg.posts;

neg=neg.row;

neg=neg(1:1000);

pos=preprocessor(pos);

pos=preprocessor(pos');

pos{1}

pos{2}

pos{2}.Text

pos{2}.Attributes

for i=1:size(pos,2)

pos{i}=pos.Attributes.Body;

end

for i=1:size(pos,2)

pos(i)=pos.Attributes.Body;

end

for i=1:size(pos,2)

pos{i}=pos{i}.Attributes.Body;

end

for i=1:size(pos,2)

neg{i}=neg{i}.Attributes.Body;

end

pos=preprocessor(pos);

neg=preprocessor(neg);

clear i

clear ans

save posts;

splits=[100,200,600,800,1000];

memory

compute\_footprint

'android samsung galaxy'

compute\_footprint

'android samsung galaxy'

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'android samsung galaxy'

save(footprint\_ngram,footprint);

save(footprint\_ngram.mat,footprint);

save('footprint\_ngram.mat',footprint);

filename='footprint\_ngram.mat';

save(filename,footprint);

save('footprint\_ngram',footprint);

featureVector = featurize(pos, 10, 1, 0);

featureVectorOrig = featureVector;

save('featureVectorn10.dump','featureVector')

featureVector = featurize(pos', 10, 1, 0);

featureVectorOrig = featureVector;

save('featureVectorn10.dump','featureVector')

featureVector = featurize([pos;neg]', 10, 1, 0);

featureVector = featurize([pos neg]', 10, 1, 0);

B = TreeBagger(4,featureVector,[ones(1000,1); 2\*ones(1000,1)]');

B = TreeBagger(4,featureVector,[ones(1:500,1); 2\*ones(1001:1500,1)]');

compute\_footprint\_RF

%-- 4/6/2016 12:45 PM --%

compute\_footprint

'android samsung galaxy'

clear all

load('posts.mat')

compute\_footprint\_RF

load('feature\_Vector\_combined.mat')

compute\_footprint\_RF

B = TreeBagger(4,featureVector,[ones(1:500,1); 2\*ones(1001:1500,1)]');

B = TreeBagger(4,[featureVector(1:500,:);featureVector(1001:1500,:)],[ones(500,1); 2\*ones(500,1)]');

compute\_footprint\_RF

save RF\_all;

clear all

compute\_footprint

'android samsung galaxy'

compute\_footprint

'android samsung galaxy'

compute\_footprint

'android galaxy samsung'

save ngram\_all;

clear all

load('RF\_all.mat')

clear all

load ngram\_all.mat

footprint(2,1)

footprint(2,5)

clear all

load('feature\_Vector\_combined.mat')

help svmtrain

s = svmtrain([featureVector(1:500,:);featureVector(1001:1500,:)], [ones(500,1);2\*ones(500,1)]);

save svm\_data

sv = s.SupportVectors;

alphaHat = s.Alpha;

bias = sBias;

kfun = s.KernelFunction;

kfunargs = s.KernelFunctionArgs;

f = kfun(s.SupportVectors,featureVector(501:500+splits(janice),:),kfunargs{:})'\*alphaHat(:) + bias;

s

s.SVs

s.sv\_coef

help svmtrain

s = svmtrain([featureVector(1:500,:);featureVector(1001:1500,:)], [ones(500,1);2\*ones(500,1)]);

help fitcsvm

s=fitcsvm([featureVector(1:500,:);featureVector(1001:1500,:)],[ones(500,1);2\*ones(500,1)] );

s

[label,score] = predict(s,featureVector(501:1000,:) );

save svm\_data

clear all

compute\_footprint\_svm

size(label,1)

compute\_footprint\_svm

save footprint\_svm.mat

clear all

load('footprint\_RF.mat')

clear all

load('RF\_all.mat')

clear all

load('ngram\_all.mat')

clear all - footprint

load('ngram\_all.mat')

clear all -except footprint

load('ngram\_all.mat')

clear all - except footprint

load('ngram\_all.mat')

clearvars -except footprint

load('RF\_all.mat')

ckear all

clear all

load('ngram\_all.mat')

clearvars -except footprint

footprint\_ngram=footprint;

clear footprint

load('RF\_all.mat')

footprint\_rf=footprint;

clearvars -except footprint\_ngram footprint\_rf

load('svm\_data.mat')

load('footprint\_svm.mat')

clearvars -except footprint\_ngram footprint\_rf footprint\_svm

load('footprint\_svm.mat')

clearvars -except footprint\_ngram footprint\_rf footprint\_svm

plot()

plot(footprint\_ngram(1,:),'-.k')

x=[1000,2000,3000,4000,5000];plot(footprint\_ngram(1,:),x,'-.k','LineWidth',4)

x=[1000,2000,3000,4000,5000];plot(x,footprint\_ngram(1,:),'-.k','LineWidth',4)

x=[1000,2000,3000,4000,5000];plot(x,footprint\_ngram(1,:),'.-k','LineWidth',4)

x=[1000,2000,3000,4000,5000];plot(x,footprint\_ngram(1,:),'k-o','LineWidth',4)

hodl on

hold on

plot(x,footprint\_rf(1,:),'r-o','LineWidth',4)

figure

plot(x,footprint\_rf(1,:),'r-o','LineWidth',4)

plot(x,footprint\_svm(1,:),'b-o','LineWidth',4)

figure

x1=[100,200,300,400,500];

plot(x,footprint\_rf(1,:),'r-o','LineWidth',4)

plot(x,footprint\_svm(1,:),'b-o','LineWidth',4)

figure

plot(x,footprint\_rf(1,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_svm(1,:),'b-o','LineWidth',4)

legend('N-gram','SVM/RF')

plot(x,footprint\_rf(1,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_svm(1,:),'b-o','LineWidth',4)

legend('RF','SVM');

figure

plot(x,footprint\_rf(2,:),'r-o','LineWidth',4)hold on;

plot(x,footprint\_svm(2,:),'b-o','LineWidth',4);plot(x,footprint\_ngram(2,:),'k-o','LineWidth',4)

igure

plot(x,footprint\_rf(2,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_svm(2,:),'b-o','LineWidth',4);plot(x,footprint\_ngram(2,:),'k-o','LineWidth',4)

plot(x,footprint\_rf(2,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_svm(2,:),'b-o','LineWidth',4);plot(x,footprint\_ngram(2,:),'k-o','LineWidth',4)

legend('RF','SVM','N-gram')

figure

plot(x,footprint\_rf(2,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_rf(3,:),'r-o','LineWidth',4);hold on;

plot(x,footprint\_svm(3,:),'b-o','LineWidth',4);plot(x,footprint\_ngram(3,:),'k-o','LineWidth',4)

legend('RF','SVM','N-gram')

%-- 4/7/2016 9:44 AM --%

load('footprint\_RF.mat')

clear all

load('RF\_all.mat')

accuracy\_rf

plot(splits,accuracy,'k-o','LineWidth',4)

y = awgn(featureVector,10,'measured');

yd=featureVector+rand(1,numel(featureVector)).\*featureVector/100;

yd=featureVector+rand(size(featureVector,1),numel(featureVector)).\*featureVector/100;

snr = 10.^(0.1.\*5);

noise = 1/sqrt(2)\*(randn(2000,2296)+1i\*randn(2000,2296));

fv\_noise = featureVector+ noise.\*snr(I);

fv\_noise = featureVector+ noise.\*snr;

for janice=1:5

tic

[labels,scores]=B.predict(featureVector(501:500+splits(janice),:));

labels=str2num(cell2mat(labels));

accuracy(janice)=size(find(labels==1),1)/size(labels,1);

end

noise\_accuracy\_rf

accuracy=[];

noise\_accuracy\_rf

clearvars -except accuracy

accuracy\_rf=accuracy;

clearvars -except accuracy\_rf

load('svm\_data.mat')

splits=[100,200,300,400,500];

snr = 10.^(0.1.\*5);

noise = 1/sqrt(2)\*(randn(2000,2296)+1i\*randn(2000,2296));

fv\_noise = featureVector+ noise.\*snr;

for janice=1:5

tic

[labels,scores]=s.predict(featureVector(501:500+splits(janice),:));

labels=str2num(cell2mat(labels));

accuracy\_svm(janice)=size(find(labels==1),1)/size(labels,1);

end

splits=[100,200,300,400,500];

snr = 10.^(0.1.\*5);

noise = 1/sqrt(2)\*(randn(2000,2296)+1i\*randn(2000,2296));

fv\_noise = featureVector+ noise.\*snr;

for janice=1:5

tic

[labels,scores]=s.predict(featureVector(501:500+splits(janice),:));

%labels=str2num(cell2mat(labels));

accuracy\_svm(janice)=size(find(labels==1),1)/size(labels,1);

end

compute\_footprint

'android junk junk'

accuracy\_ngram=footprint(3,:);

clearvars -except accuracy\_rf accuracy\_svm accuracy\_ngram

x=[1000,2000,3000,4000,5000];plot(x,accuracy\_rf,'k-o',LineWidth,4);hold on;

x=[1000,2000,3000,4000,5000];plot(x,accuracy\_rf,'k-o','LineWidth',4);hold on;

x=[1000,2000,3000,4000,5000];plot(x,accuracy\_svm,'r-o','LineWidth',4);hold on;

x=[1000,2000,3000,4000,5000];plot(x,accuracy\_ngram,'b-o','LineWidth',4);hold on;

legend('RF','SVM','N-gram')

load('footprint\_svm.mat')

[a,b]=h = kstest2(accuracy\_svm,footprint(3,:))

[a,b]=kstest2(accuracy\_svm,footprint(3,:))