function R=myNCC(image1,image2)

s1=size(image1);

s2=size(image2);

% n parameter to control similarity metrics

% n=1 normalized cross-correlation 2sum of absolute difference 3 sum of square

% error

n=1;

if s1~=s2

disp('size of image not match');

return

end

%normalized cross-correlation

if n==1

bar\_fl=mean(image1,"all");

bar\_drr=mean(image2,'all');

Dfl=image1-bar\_fl;

Ddrr=image2-bar\_drr;

corr=Dfl.\*Ddrr;

a=sum(corr,"all");

c=sum(Dfl.^2,"all");

d=sum(Ddrr.^2,'all');

R=a/sqrt(c\*d);

end

end

function error=SSE(fixed, moving, tx, ty, param)

if isfield(param, 'scaling')

scaleFactor= param.scaling;

else

scaleFactor=1;

end

Tx= tx\*scaleFactor;

Ty= ty\*scaleFactor;

translated = imtranslate(moving,[Tx,Ty], "OutputView","same");

error= sum((fixed(:)- translated(:)).^2);

end