```
%Compute a time series prediction using a reservoir network layout
clc
clear
%Load data
tic
A = readmatrix("training-set.csv");
B = readmatrix("test-set-9.csv");
%%



%Initialize

kI = eye(500).*0.01;
M = 500;
N = 3;

time_steps = 500;
W_in = randn(500,N)*sqrt(0.002);
W_reservoir = randn(500)*sqrt(2/500);

%initial states of reservoir neurons:
r = zeros(500,1);
R = zeros(500,length(A));
%training
for o = 1:(length(A)-1)

x = A(:,o);
R(:,o) = r(:);

r = tanh(W_reservoir*r + W_in*x);
%Update rule

end


%Ridge regression

W_out = A*R' * (R*R' + kI)^(-1);
%end %End of training




%%



for o = 1:(length(B)-1)

x = B(:,o);
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R(:,o) = r(:);

r = tanh(W_reservoir*r + W_in*x);
%Update rule

end
O = W_out*r;

%Predict the future:

for t = 1:time_steps


    r = tanh(W_reservoir * r + W_in * O);
    O = W_out*r;

y_components(t) = O(2);

end
toc
csvwrite("prediction.csv",y_components);
```