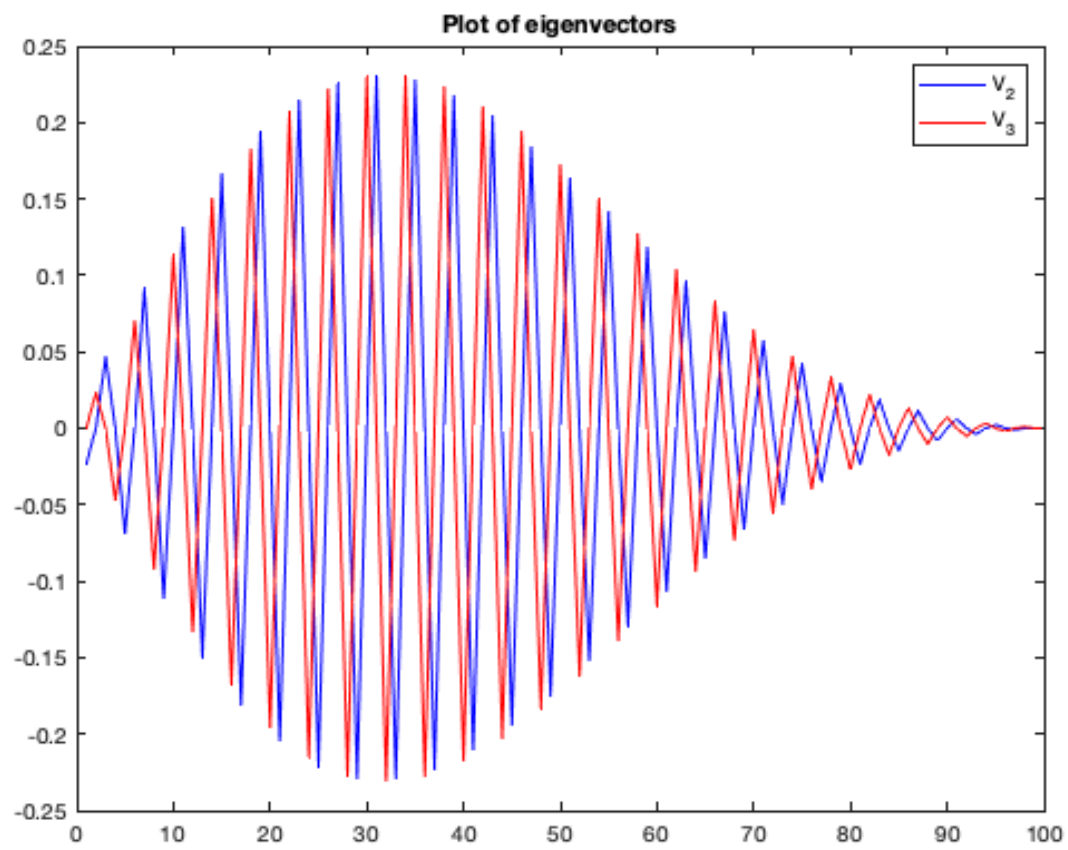

Week 2 Assignment: eigenvalue problem of a 100x100 matrix

```
kk = 197:-2:1;
a = kk./(1+kk);
a = [a(1:end-3),zeros(1,2)];
A = diag(a,2)+diag(a,-2);
b = sqrt(kk);
b1 = b(1:end-2);
A(99,1:97) = b1;
A(1:97,99) = b1';
[V,D] = eig(A);
s = diag(D);
s(1:3)
jj = 1:100;
plot(jj,V(:,2),'b',jj,V(:,3),'r')
legend('V_2','V_3');
title('Plot of eigenvectors')
```

ans =

```
-98.0149
-1.9779
-1.9776
```



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