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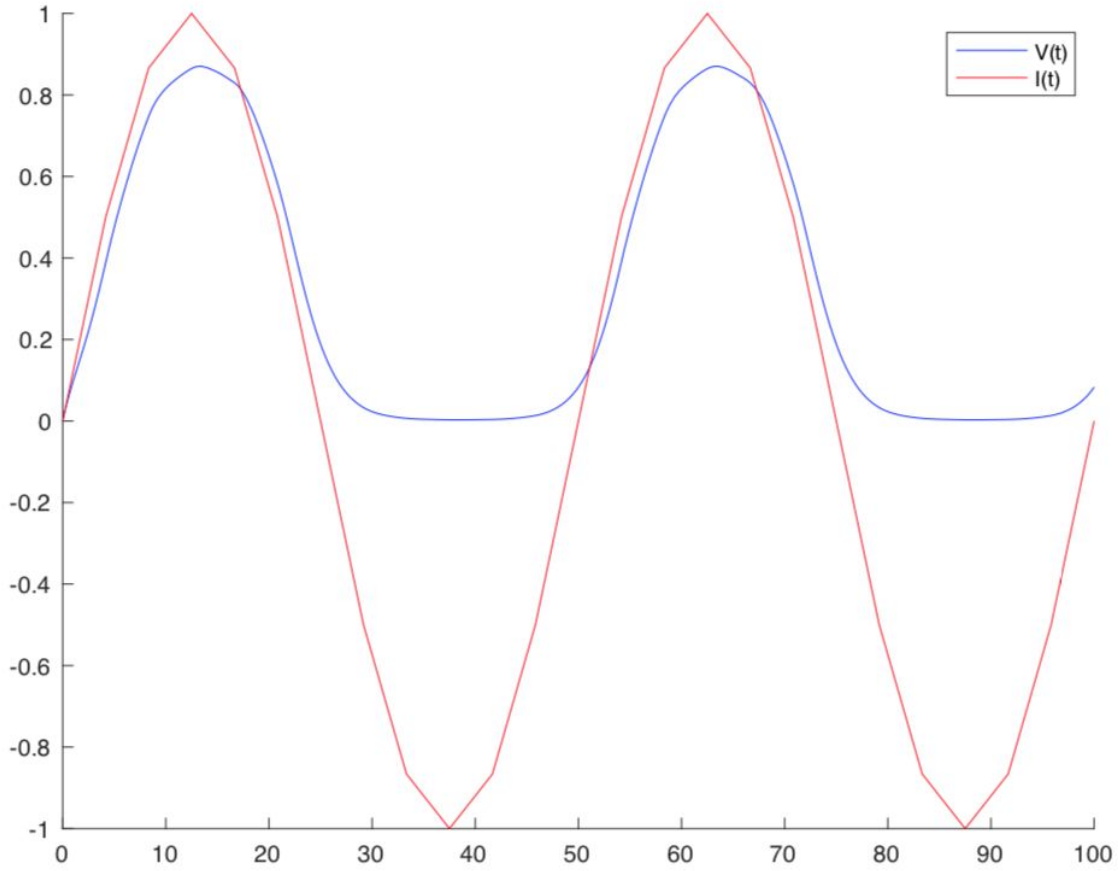
NSCI 360, Fall 2019
Assignment 3

Level 3: Compute time-solutions of a dynamical system / neural network




The model is treated as a continuous time system. The output, V(t), is an adaptive evaluation of I(t) predicting its behavior.

I(t) approximates sin(pi.*t) using Euler's method to plot the curve of the function at each time step $t_i$ = (100.*i)./24. It is a function of t and is not smooth, i.e has discontinuous derivatives. V(t) is a multivariate function, receiving inputs from the sigmoid function, f(I), and t for all t in the interval [0,100]. It is a smooth function, having continuous derivatives for all t.