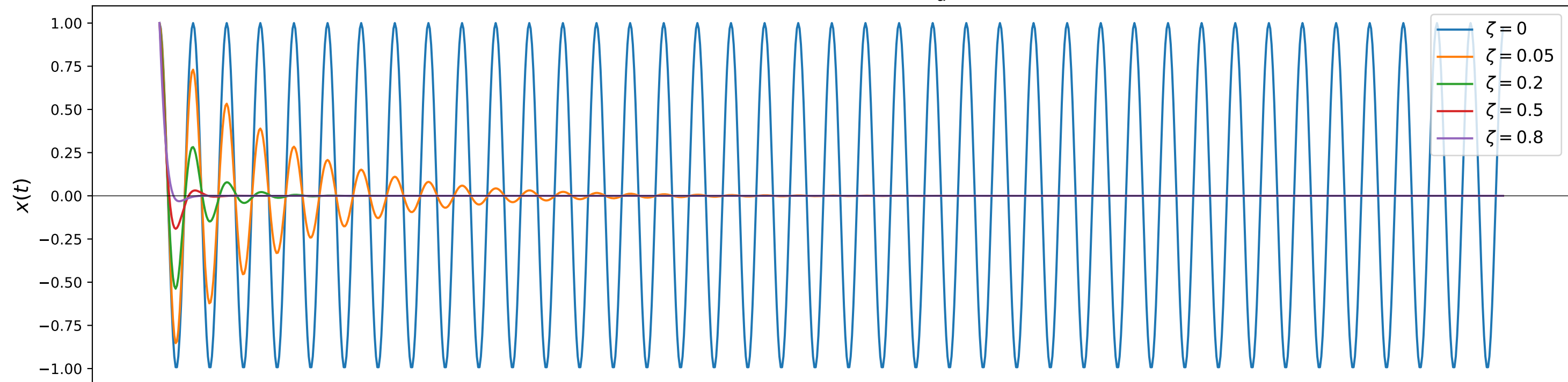


$$\omega_0 = 8\text{Hz}$$

$$x(t) = Ae^{-\omega_0\zeta t}\cos(\omega_d t)$$



$$\dot{x}(t) = -\omega_0 Ae^{-\omega_0\zeta t}(\zeta\cos(\omega_d t) + \omega_d\sin(\omega_d t))$$

