Project 9 - Physics informed neural network

Solve for the wavefunctions of a particle in a box of length $L = 1$ by making use of PINNS to solve

$$-\frac{\hbar^2}{2m}\frac{d^2\psi}{dx^2} = E\psi \tag{1}$$

Take different values of E as

$$E = \frac{n^2\pi^2\hbar^2}{2m}; \qquad n = 1, 2, 3, ... \tag{2}$$

to get the different wavefunctions

You can use this example `https://github.com/nanditadoloi/PINN/blob/main/solve_PDE_NN.ipynb`

If the energy eigenvalues were not known, how would the neural network have to be changed to find the eigenvalues also?