Dendritic computation and ANNs

Background: Recently, people showed that the complexity of single biological neuron is equivalent to an ANN with 5-8 layers (Beniaguev et al, 2021). Can you verify/falsely this hypothesis by training a deep neural network to fit the input-output relation of a biological neuron (model)?

Project setups: [Jupyter Notebook demo]

Project map: The project core is covered by Q1-4; subsequent questions can be taken in any order.