

SSP100 Class Notes

Basics of Neural Networks

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Spring, 2001

Some prehistory on Nerves

Egypt (1700BC) Edwin Smith Papyrus details existence of nervous system and relevance to numerous disorders.

Galenus (130BC) Sensory nerves are independent of motor nerves; nerves are hollow tubes through which liquid flows.

Newton (1660) Nerves transmit vibrations.

Galvani (1791) Nerves transmit electricity.

Helmholz, Du Bois-Reymond (1850) Neural signals are sent as a sequence of pulses travelling at about 90mph.

Early History of Neural Networks

McCulloch and Pitts (1943) developed models of neural networks

Rosenblatt (1958) proposed the perceptron, a three layer neural network (input layer, association layer, output layer). But only one layer is *active*.

Minsky and Pappert (1969) Showed limitations of the single active layer approach, and suggested that there was no way to generalize to multiple active layers.