

# The Historical Evolution of Neural Networks

## The Perceptron John Rosenblatt

- **The Spark:** The first "trainable" network that showed machines could learn weights from raw data.

1957

## Boltzmann Machine Hinton & Sejnowski

- **Stochastic Depth:** Using probability and randomness to learn deep representations of complex data.

1985

## Support Vector Machines (SVM)

- **The Rival:** A powerful mathematical alternative that became the gold standard for classification.

1990

## The Rise of the GPU

- **The Engine:** Shifting to parallel processing units to handle the heavy matrix math of neural networks.

1993

## The Deep Learning Revolution

- **The Big Bang:** When AlexNet crushed the ImageNet competition and proved the power of CNNs.

2012

1943

## Warren McCulloch & Pitts Neuron

- **The Blueprint:** Proving that the human brain can be modeled as a biological computing device

1982

## Hopfield Network John Hopfield

- **Neural Memory:** Introducing recurrent networks that acted as associative memory systems.

1986

## Backpropagation Rumelhart, Hinton, & Williams

- **The Math Fix:** The breakthrough that finally allowed us to train multilayer networks effectively.

1990s

## AI Winter

- **The Plateau:** A period where limited computing power led to reduced interest and funding in AI.

1997

## LSTM Hochreiter & Schmidhuber

- **Sequence Mastery:** Solving the "vanishing gradient" problem to allow for long-term data predictions.



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