

Neural Networks: The Early Years (1943-1969)

*Birth of
Cybernetics*

*The Golden
Age*

McCulloch-Pitts

Mathematical Neuron Model

First mathematical model
of neural computation

1943

Hebbian Learning

Donald Hebb

"Neurons that fire
together, wire together"

1949

Perceptron

Frank Rosenblatt

First learning machine
(Mark I Perceptron)

1957

NYT Headline

Media Hype

"Navy device learns
by doing"

1958

ADALINE

Widrow & Hoff

Delta rule
(Gradient descent)

1960

Perceptrons Book

Minsky & Papert

Proved limitations
AI Winter begins

1969

**AI Winter
Begins**

From mathematical model to practical machine to fundamental limitations