




Artificial Intelligence Programming

Neural Networks

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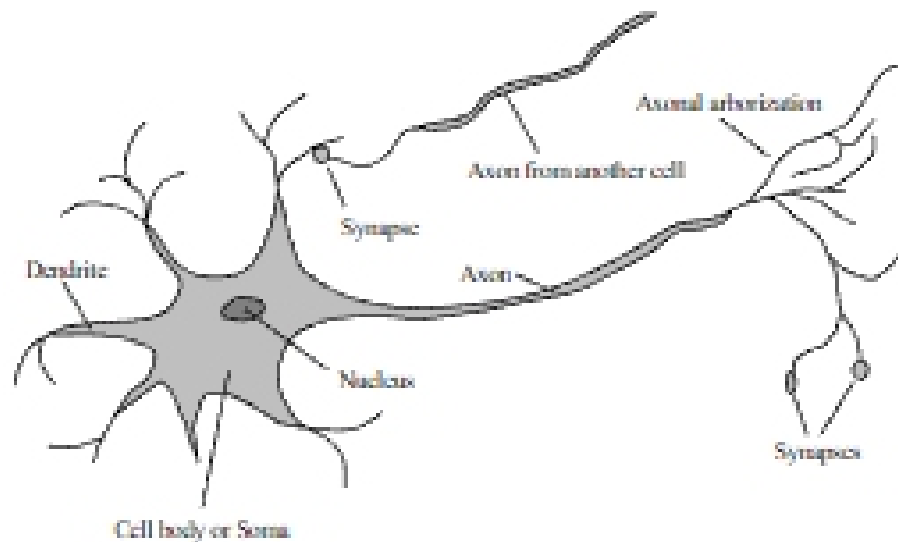
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Neural networks

- Much of what we've studied so far can be classified as *symbolic AI*.
- Focus on symbols and relations between them.
 - Search, logic, decision trees, MDPs
- The underlying assumption is that manipulation of symbols is the key requirement for intelligent behavior.
- Neural networks focus on *subsymbolic* behavior.
- Intelligent behavior emerges from the interaction of simple components.

Biology vs Computer Science



- In biological neurons, signals are received by dendrites and propagated to other neurons via the axon.
- Signaling and firing is very complex
- Thought and behavior are produced through the interaction of thousands of neurons.