

# COMPSCI 366 S1 C 2006

## Foundations of Artificial Intelligence

—History of AI—

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# The Foundations of AI

- Philosophy (428 B.C.–present)
- Mathematics (c. 800–present)
- Economics (1776–present)
- Neuroscience (1861–present)
- Psychology (1879–present)
- Computer engineering (1940–present)
- Control theory and cybernetics (1948–present)
- Linguistics (1957–present)

## Russell/Norvig's View of the History of AI

- The gestation of artificial intelligence (1943–1956)
- Early enthusiasm, great expectations (1952–1969)
- A dose of reality (1966–1974)
- Knowledge-based systems: The key to power? (1969–1979)
- AI becomes an industry (1980–1988)
- The return of neural networks (1986–present)
- AI becomes a science (1987–present)
- The emergence of intelligent agents (1995–present)

## Key Events

- McCulloch and Pitts's model of artificial neurons (1943)
- Hebb's learning rule (1949)
- Minsky and Edmonds's first neural network computer (1951)
- Dartmouth workshop (1956)
- Samuel's checker program (1952)
- MIT AI Lab Memo No. 1 on Lisp by John McCarthy (1958)
- Machine evolution (genetic algorithms) (1958)

## Key Events (cont'd)

- Gelernter's GTP program (1959)
- Rosenblatt's perceptrons (1962)
- Weizenbaum's program Eliza (1965)
- Various microworld programs (1967-1974)
- Lighthill report (1973)
- Minsky and Papert's book on perceptrons (1969)

## Key Events (cont'd)

- Dendral (1969)
- Lunar (1973)
- Minsky's idea of frames (1975)
- Prospector (1979)
- R1 (1982)
- Fifth generation project (1981)
- Rumelhart and McClelland's PDP books (1986)
- Pearl's work on probabilistic reasoning (1988)