

# Approaches for AI

Dartmouth  
conference

SHRDLU  
(Winograd 68)

5<sup>th</sup> Generation Computing  
(by MITI 82~92)  
Parallel Inference Machine  
Expert system

Semantic Web  
(Berners-Lee)

Watson  
(IBM)

Knowledge Graph  
(Google 12)

Rule base / Symbolic manipulation / Inference Engine

1<sup>st</sup> AI

2<sup>nd</sup> AI

3<sup>rd</sup> AI

1960

70

80

90

2000

10

20

Data Driven / Pattern Recognition / Machine Learning

Perceptron  
(Rosenblatt 57)

“Linear Separable”  
(Minski & Papert 68)

Back Propagation  
(Rumelhart+ 86)

Real World Computing Partnership  
(by MITI 92~02)

Bayesian Modeling

Support Vector Machine  
(Vapnik+ 92)

Deep Learning  
(Hinton+ 06 )