

# 研究报告

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# Research report

2017-5 25 edition

TSINGHUA UNIVERSITY NATIONAL INSTITUTE OF FINANCIAL RESEARCH

## The Introduction of Artificial Intelligence and its Application in Finance

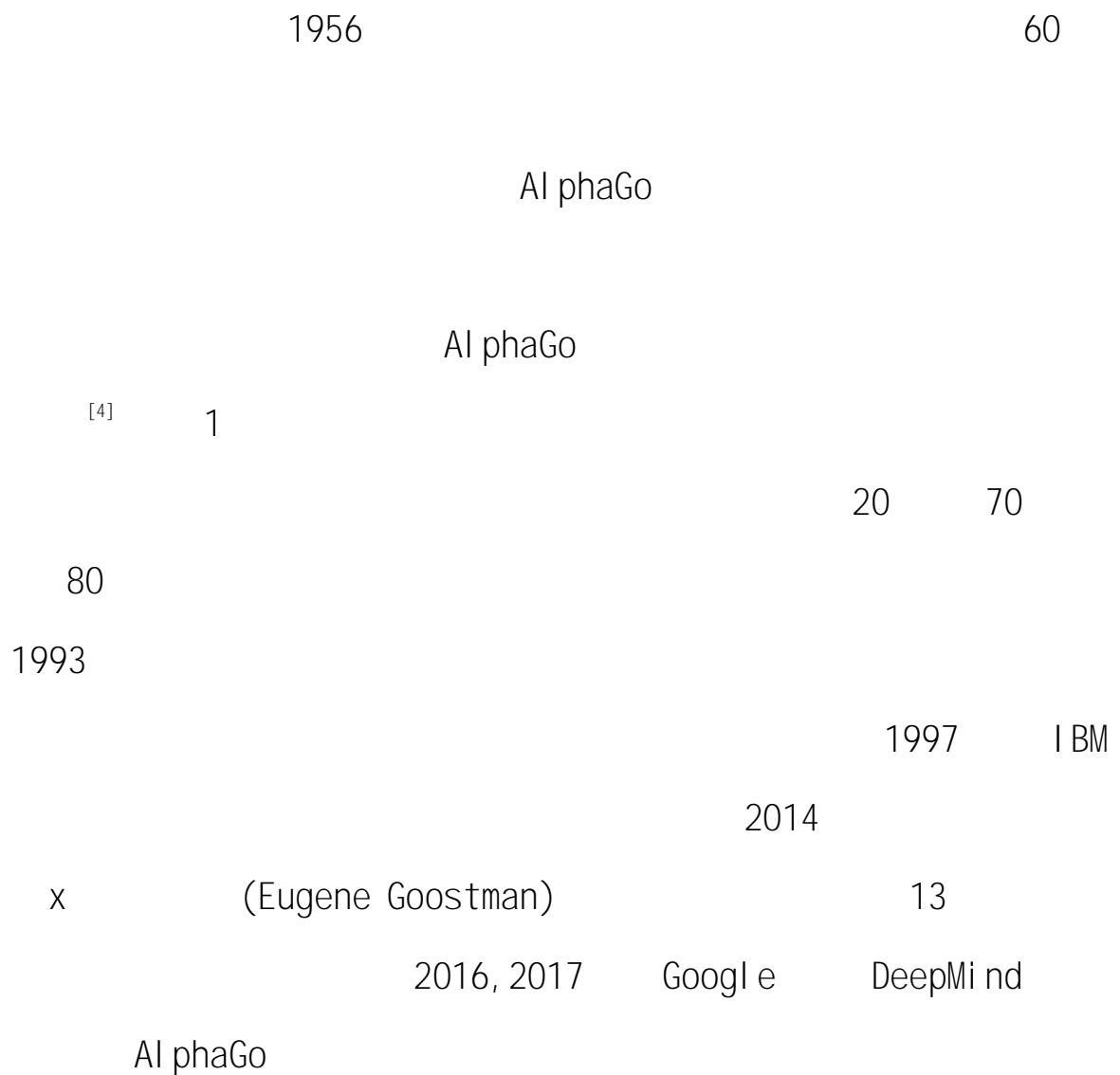
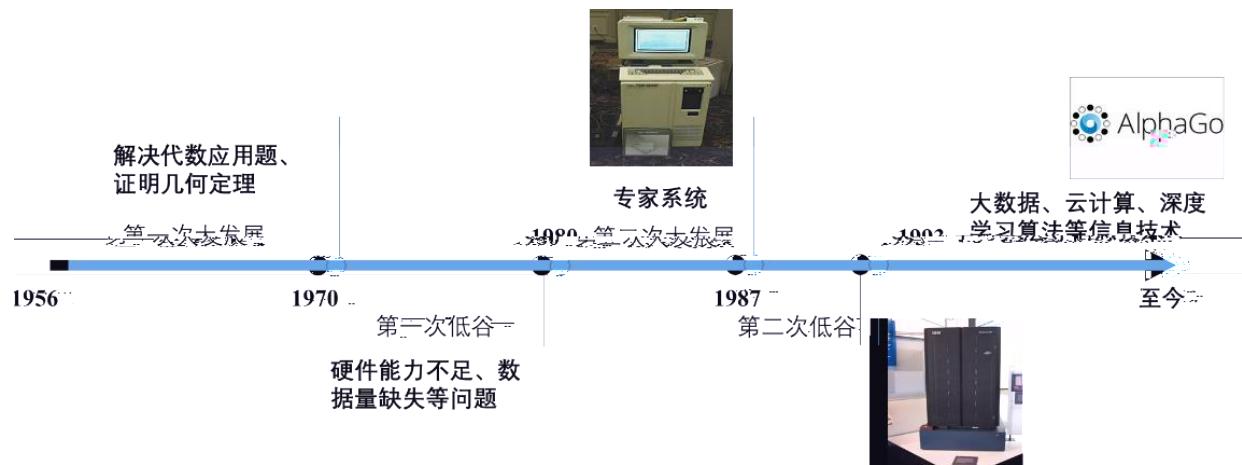
XIN Real Estate Fintech Research Center

Zhao Hui

**Abstract:**

This report introduces the basics of Artificial Intelligence, including the concept, the history, current research, applications and regulations. I

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[5]

(1) Artificial Narrow Intelligence (ANI)

Alpha Go

(2) Artificial General Intelligence (AGI)

(3) Artificial Super Intelligence (ASI)

1997

AlphaGo

$10^{16}$  cps

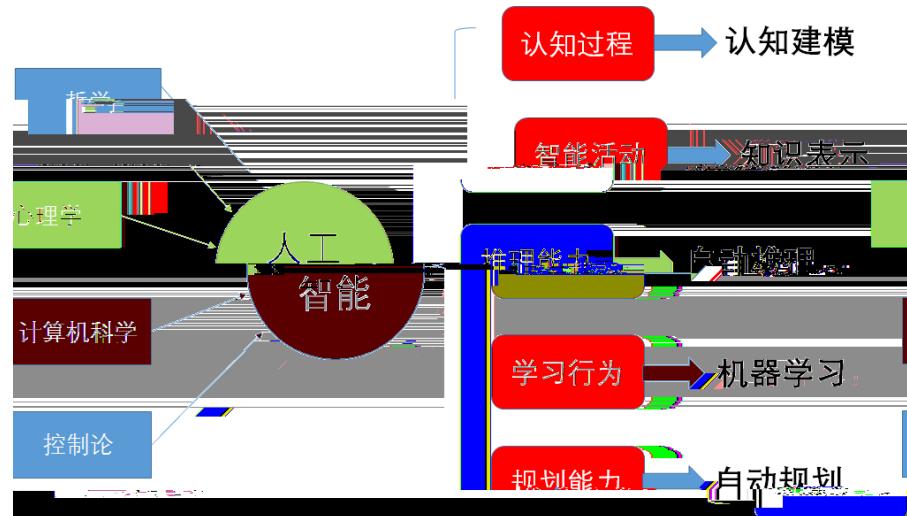
calculations per second

X

2



3



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## 2. 3. 2 (machine learning)

20 50

[6]

(supervised learning)  
(classification) (regression)

(unsupervised learning)  
(clustering)

(1) K-means

K

(2) (support vector machines, SVM)

(3) Apriori

(4) K- (K-nearest neighbor, KNN)

K

(5) (classification and regression tree, CART)

(6) (Naïve Bayesian Model )

(7) (Logistic Regression)

### 3. 3. 3

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4. 3. 4

2016

[7]

65.73%

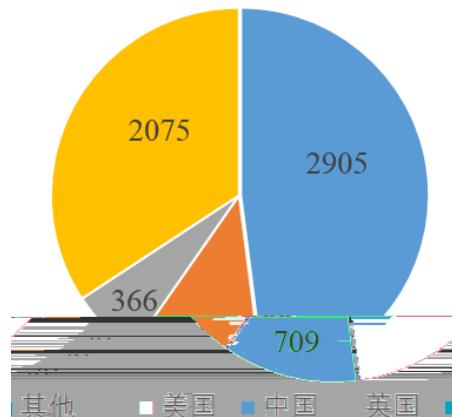
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美国人工智能申请专利细分领域

类别	百分比
机器人	32.0%
语音识别	24.0%
神经网络	14.9%
机器学习	6.8%
图像识别	5.4%

中国人工智能申请专利细分领域百分比

类别	百分比
机器人	38.3%
神经网络	17.9%
图像识别	10.4%
语音识别	8.1%
计算机视觉	5.9%

(1)



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(2)



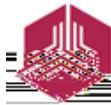


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The House of Commons  
Science and Technology Committee 2016 10

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