

Logical proof of the millennium puzzle PNP

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The existence of the premise: $S=1$, Then there is at least one P Problem(Computer-table problems)equal to NP problem (The solution is a computer-verifiable problem) then:

$P \leftrightarrow NP(P=NP)$ 。

Conclusion: For all the class P and class NP problems, There are $P=NP$, also have $P \neq NP$ 。

P&NP[Edit]

Class P : For all the problems that can be solved by a computer.

Class NP: That is, all the solutions can verify that the solution is correct.

Deduce : Inference and prediction of special events are derived from assumptions and universal principles, When using logical rules to analyse, Deductive inference relies on a set of initial assumptions i. e (generally acknowledged truth), If the original hypothesis is true, there is no logical contradiction in the same analysis, In accordance with the logical rules, then The conclusion must be true:

Problems that a computer can handle include: image processing, speech input, numerical calculation, The intersection of the three is a binary system: 0, 1。

For 0, 1, there are [0, 0] [0, 1] [1, 0] [1, 1] four types。

In Boolean algebraic system $0+1=1$,

Then, it is knowable that $1-1=0$ it is impossible that a logical expression is the same thing at the same time。

Discuss a special question here,

Computer weather forecast is obviously a P-like problem。

The weather forecast is clear if it is rainy or sunny。

Define as below:

The weather forecast is rainy equal [1]。

And the weather forecast is sunny equal [0]。

From the practical experience, Computer weather forecast is a P-like problem, And the actual verification of the weather forecast is a NP-like problem。

- ① Forecast rain, The actual weather is also raining, Then the computer weather forecast is accurate。
- ② Forecast rain, The actual weather is sunny, Then the computer weather forecast is not accurate。
- ③ Forecast sunny, The actual weather was also fine, Then the computer weather forecast is accurate。
- ④ Forecast sunny, The actual weather is raining, Then the computer weather forecast is not accurate。
- ⑤ If weather forecast is accurate, Weather forecast results will add one point (S+1), if weather forecast is not accurate, Weather forecast results will subtract one point (S-1)。
- ⑥ Logic is S+1(True), S-1(Fail).....S is assignment。

The logical truth table can be obtained as below :

Table A

1	1	S+1
1	0	S-1
0	0	S+1
0	1	S-1

By Boolean algebra , to get $S+1=1+1=1$ 。

$S-1=1-1=0$ 。

Table B

1	1	1
1	0	0
0	0	1
0	1	0

There is a left shift by the Turing machine reader to indicate :S-1, Move a grid right to indicate :S+1, Group of logical truth tables that form the p, np logic framework, It can be summed up as the logical truth table of the weather forecast (the basic starting point of this paper), above formulation, It is logically valid.

Turing machine reading head to the left : S-1, Move a grid to the right :S+1。

Table C

P	NP	
F	F	S+1
F	L	S-1
L	L	S+1
L	F	S-1

Table D

P	NP	
1	1	1
1	0	0
0	0	1
0	1	0

Be drawn from the logical table truth table:

In the s assignment of 1, $P=NP$, Record : $P \leftarrow \rightarrow NP$ 。

For all classes P and all classes NP。

By the circuit switch has on and off two states, There is 2^n ,

Constructing polynomials:

Exist $S=1+2+2^2+2^3+2^4+\dots+2^n$ 。

$H2S=2+2^2+2^3+2^4+\dots+2^{(n+1)}$ 。

There is $S=2S-S$ 。

Then $S=2^{(n+1)} - 1$

Because of higher order logic : $2^{(n+1)} = 1$ 。

And : $S=2^{(n+1)} - 1$ 。

$S=1-1$ 。

$S=0$ 。

A logical value table can be drawn:

P	NP	
F	F	0+1
F	L	0-1
L	L	0+1
L	F	0-1

That is, there is no expression for $p = np$, Serve as : $P \neq NP$ 。

For a single $S=1$ Or $S=0$ 。

Build a new logical table and a logical formula 。

$S_2=0$ Indicates that the read header remains the current state, Overwrites the current state to another state logical

expression of : S_2+1 ($S_2=0$) 。

P	NP	
F	F	1
F	L	0
L	L	1
L	F	0

P	NP	
F	F	1
F	L	1
L	L	1
L	F	1

P	NP	
F	F	S_2+1
F	L	S_2
L	L	S_2+1
L	F	S_2

$S=0$ In Boolean algebra : $S+1=1$ 。

$S_2=0$ $S_2+1=1$ 。

To get In a single time $S_2=0$, also have $P=NP$, the same $P \leftrightarrow NP$ 。

In $S=1$ condition, $S+1=1$, $S=1$ 。

$S_2=1$ then $S_2+1=1$ $S_2=1$ 。

$S_2=1$ then $P \neq NP$ 。

Summarize the above logical table,

It can be concluded that except from the Turing shutdown problem。

Have a class P problem equal to a class NP problem, There are also class P problems not equal to class NP problems。

Reference documentation :

[1] 《Formal logic》 Jin Yuelin

[2] 《Virtual and real world- -how computer simulation changes the frontiers of science》 John. L. Custy .P52,P128