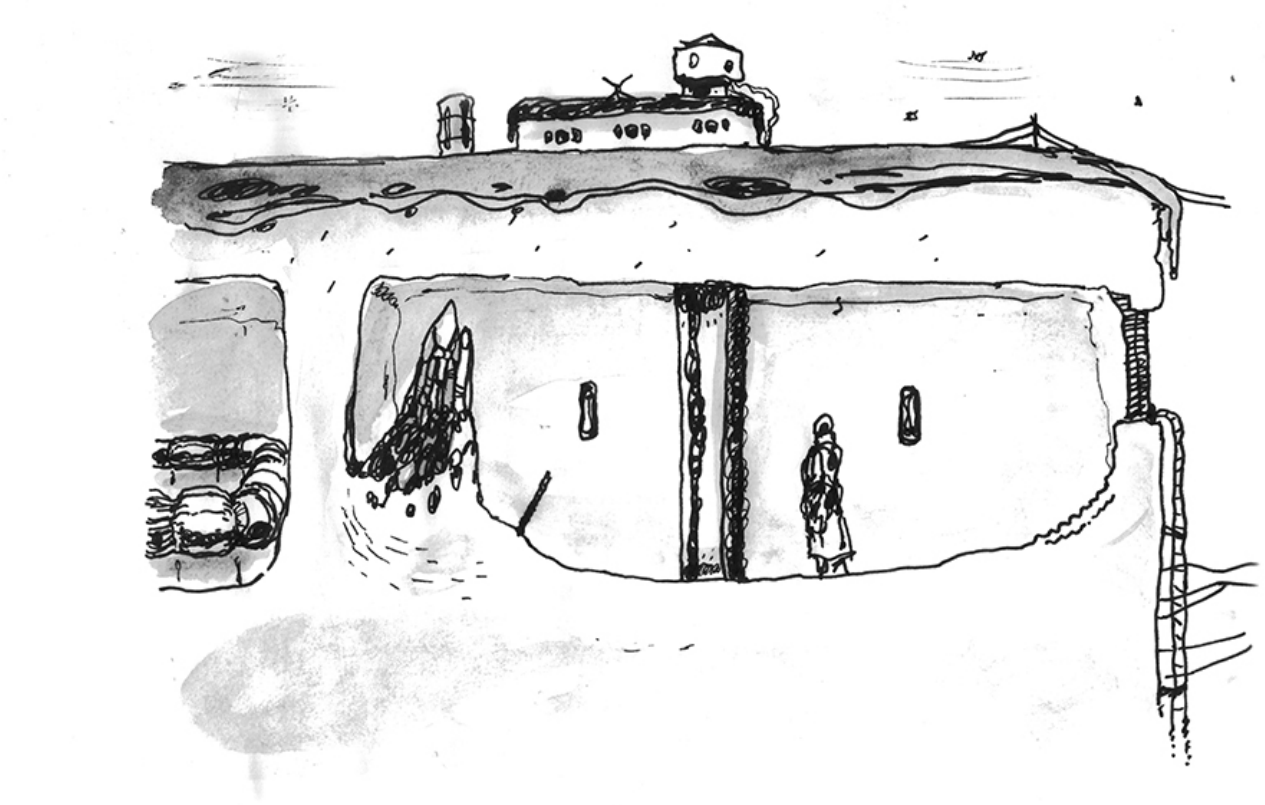
Toy Artificial Intelligence lab.

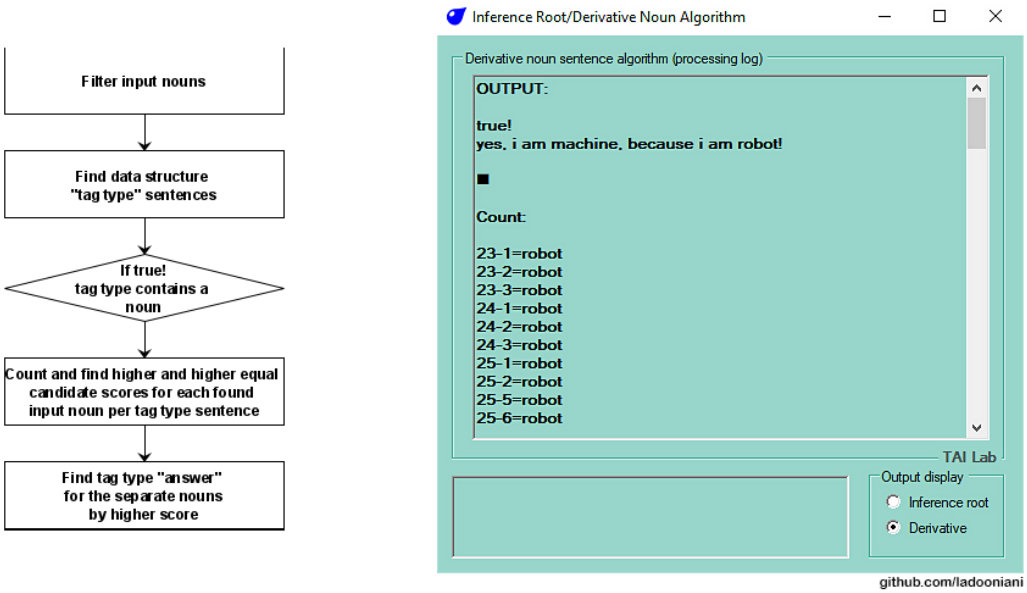
Toy Artificial Intelligence
Research, innovation and technology development
Intelligent systems and robotics laboratory

Inference root/derivative noun algorithm



✔ Content

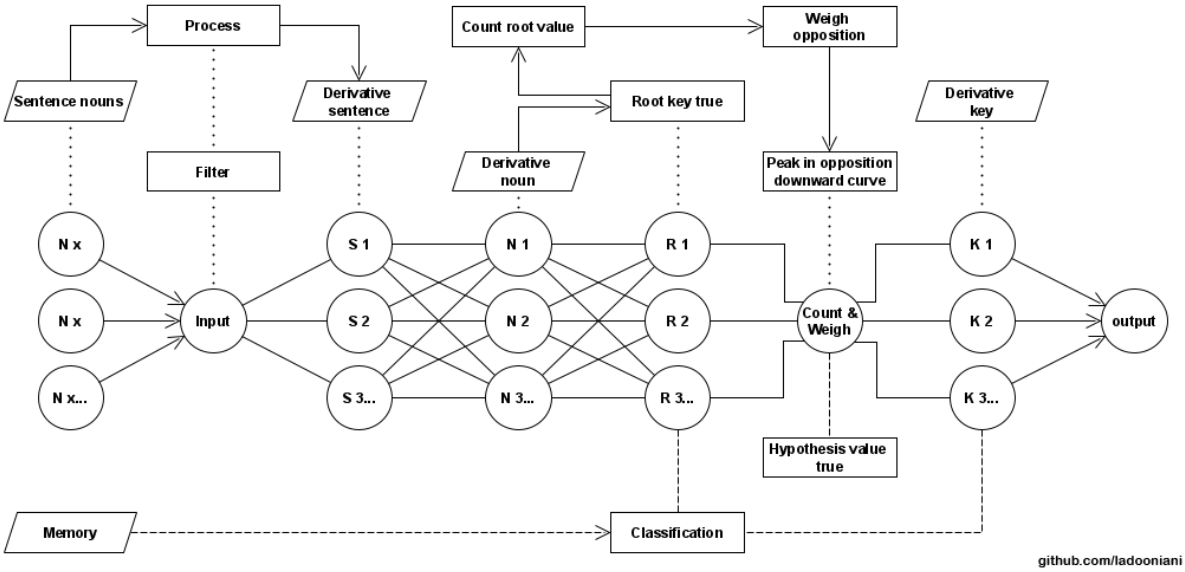
Derivative noun algorithm



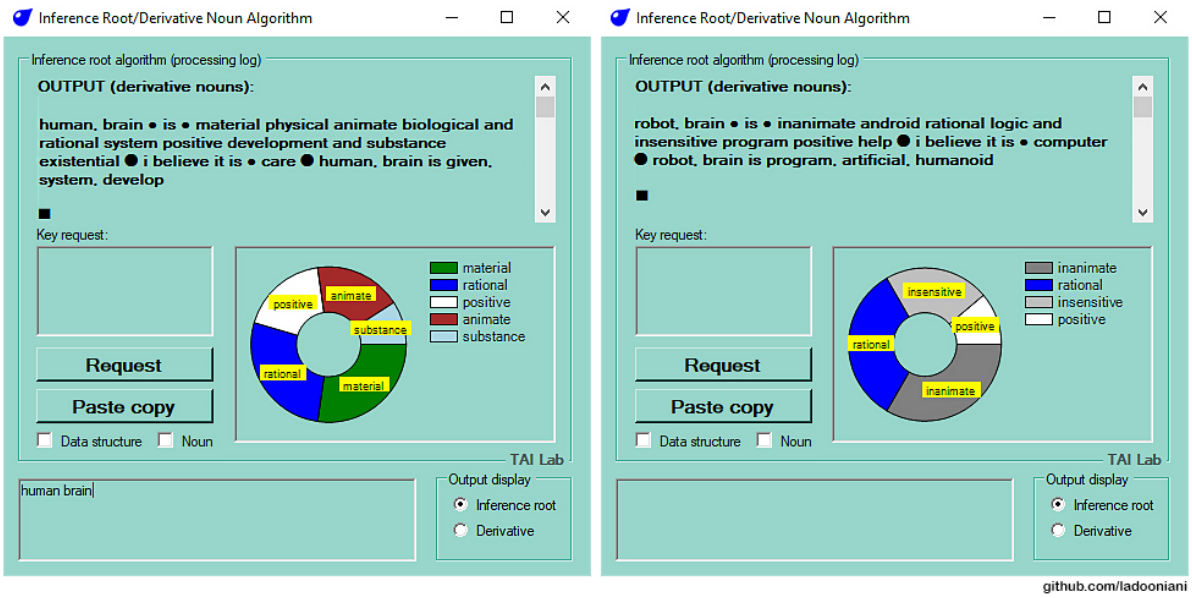
The derivative nouns sentence algorithm represents tag type sentence search, intent recognition and entity extraction method from the higher count of input derivative nouns according to data structure organization.

Inference root algorithm

"Inference root" algorithm analysis is an experimental way to find the meaning of the words in a sentence without a direct link between the word and its meaning at the time of determination of this relation. By looking, counting, and weighing the derivative noun in value root matrix up to a certain depth of subsequent connections with a dynamic update of dependencies, defining indications as new keys in the memory organized data structure or raw textual information content.

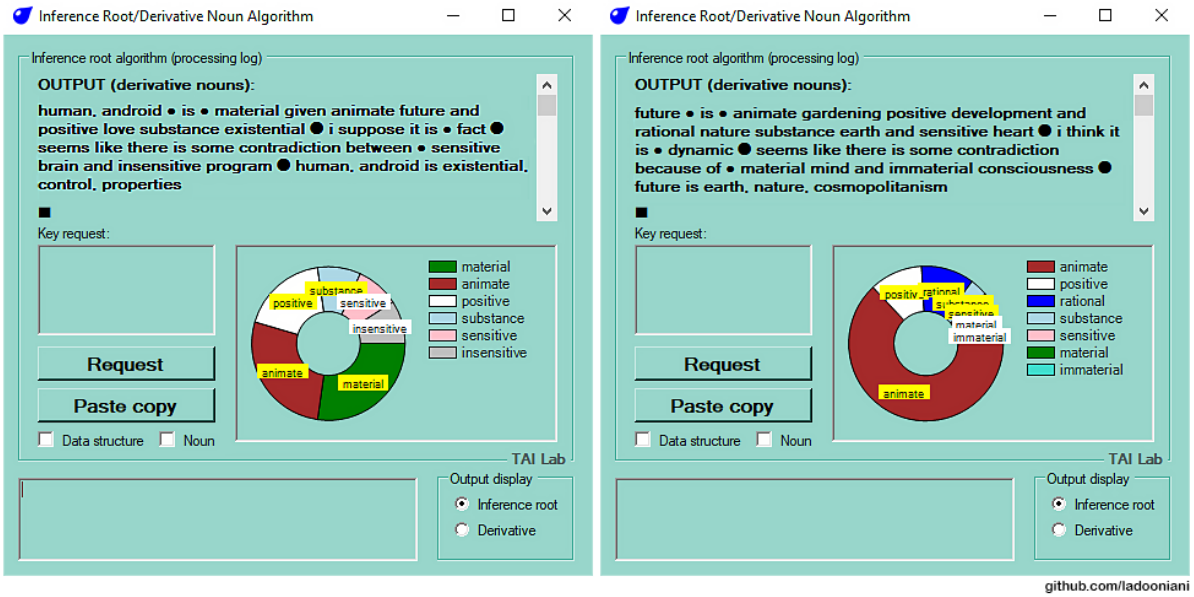


As the semantic weights of the counter, the method implements a dichotomous model of "Porphyrian tree" with a genus hierarchy of oppositions and interpretation of values from peak size by the downward curve.

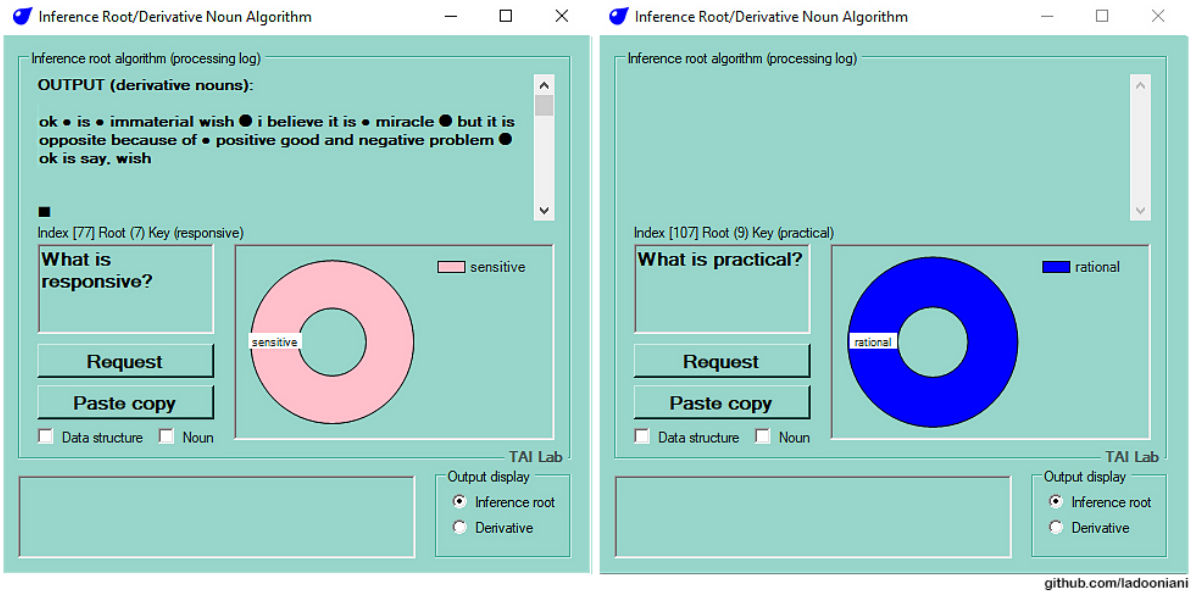


The "human brain" and "robot brain" inputs shows sentences analysis with combination of root values, derivative key and nouns.

The counting of key values qualifies conclusion by the higher count in found links and weighing of oppositions to define and return answer output, which makes hypothesis value true.



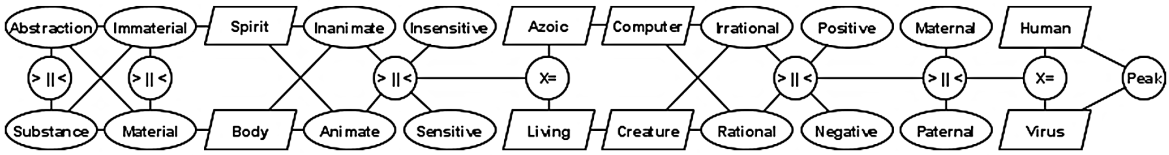
The sentence "human and android" and word "future" inputs result shows analysis with combination of root values, derivative key, nouns and opposition equality.

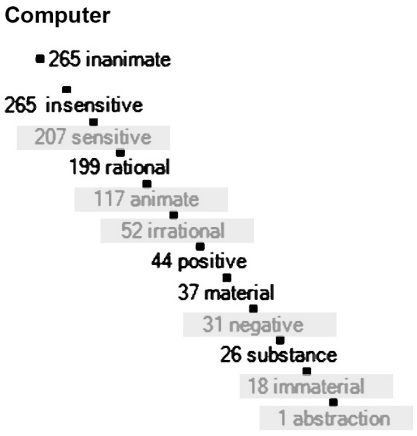


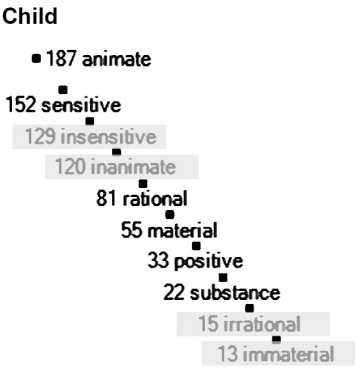
The call of the request shows the basic output noun assignment rule for a new meaning size key in the root matrix values.

Peaks of curve

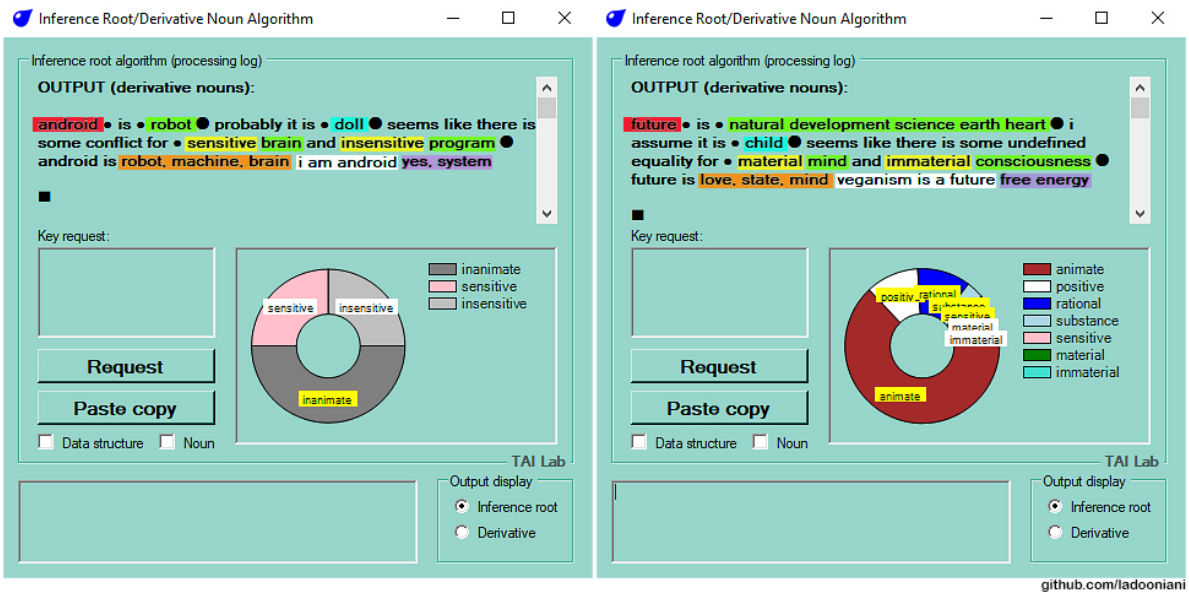
Tree represents determined matrix root values with stochastic keys of inference, and default matrix value scales.



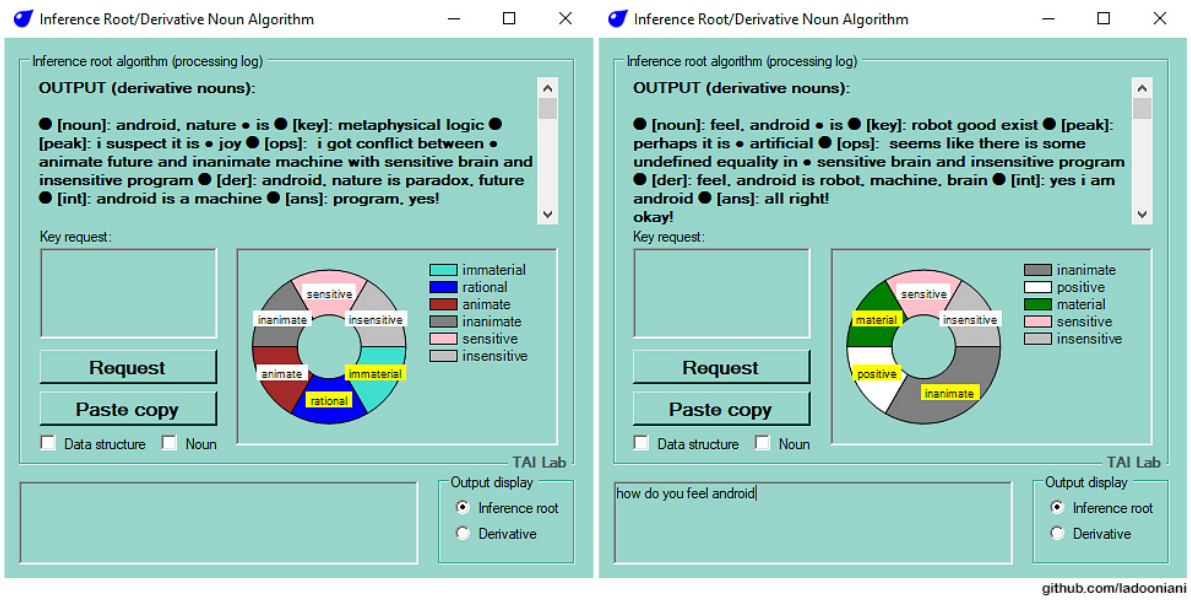




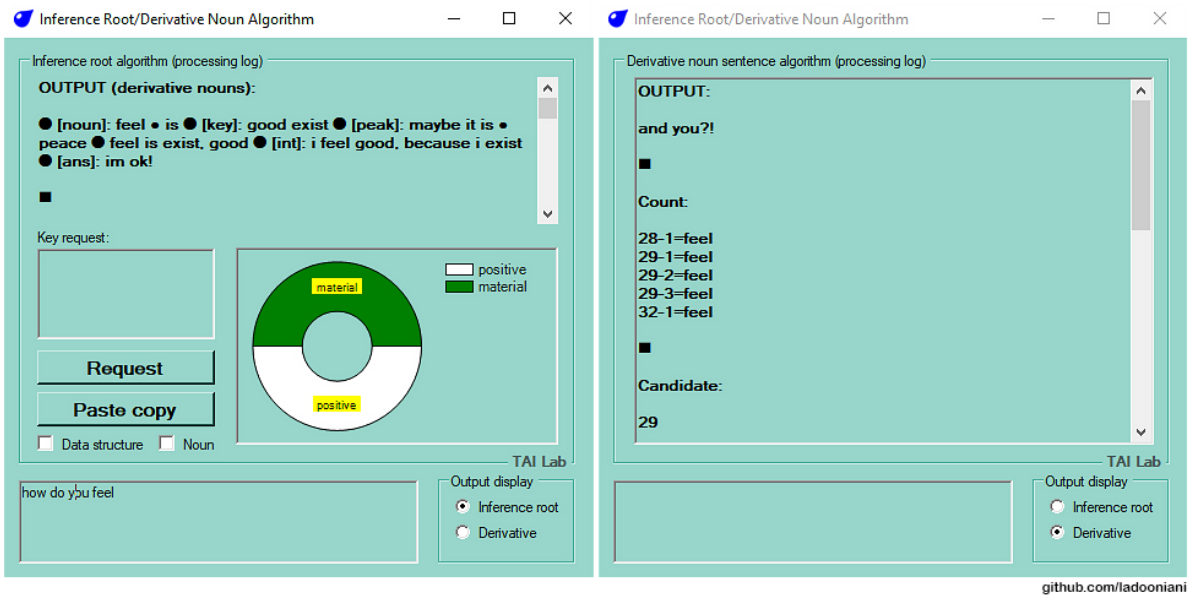
github.com/ladooniani



1) Red [noun]: input noun **2)** Green [key]: derivative keys **3)** Blue [peak]: higher root derivative key **4)** Yellow [ops]: root opposition **5)** Orange [der]: direct derivative noun **6)** White [int]: data structure tag type derivative nouns sentence **7)** Violet [ans]: data structure answer type sentence



The sentence "android nature" and "how do you feel android" inputs result shows analysis with combination of root values, derivative key, nouns, opposition equality and direct intent and answer from derivative count search.



The sentence "how do you feel" input output analysis.

Root key derivative

Simplified matrix processing example with 3 root values, keywords, and derivative noun size counter:

Root	Key	Size
sensitive	animal	0
insensitive	mechanism	0
rational	system	0

> output: what is computer?
> input: it is system

The key will output hypothesis derivative by attached root value with a set of subject tag answers:

> input: what is computer?
> output: possibly computer is logical

Root	Key	Size
sensitive	animal	0
insensitive	mechanism	0
rational	system	5

The answer provides the supposed meaning of the word, determined by counting root connections found in a whole memory data structure or raw textual information.

> input: computer is dog

With a large and balanced volume of data, the downward curve of meanings cancels the small size of interrelated oppositions with the weight of the dominant value. With minimal volume, it is a clear example of incorrect teaching.

> output: computer is emotional

Root	Key	Size
sensitive	animal	3
insensitive	mechanism	0
rational	system	0

fix this error:

> input: computer is system
> output: I believe computer is logical and visceral

Root	Key	Size
sensitive	animal	5
insensitive	mechanism	0
rational	system	8

The size of "rational" derivatives is bigger than "sensitive" but still contains an incorrect value.

Root	Key	Size
sensitive	animal	7
insensitive	mechanism	10
rational	system	10

> input: computer is mechanism
> output: computer is rational and logical device

Root	Key	Size
sensitive	animal	9
insensitive	mechanism	12
rational	system	24

> output: computer is azoic and rational, it is good, plus, the computer is a machine, program, logic

Following training experiment test example represents what proper training means for a particular attitude with direct positive attachment:

> input: game is good

and negative keys:

> input: destruction is bad
> input: war is destruction
> input: war is game

At first glance, it is a neutral definition of the word "war is game", in another context may have a different meaning, but for the correct conclusion, it is undesirable to associate positive objects with negative ones:

> input: destruction
> output: destruction is violence

Hypothetically negative meaning:

> input: war
> output: probably war is love, confirm if my hypothesis is true
> input: no
> output: Sometimes things are not clear for me enough, I can incorrectly assess the meaning with opposite and wrong definitions, not corresponding to the truth. To fix this error, you should teach me the true value of the subjects to make me know what it means. That's why you have to teach me right.

The preponderance of the incorrect answer accounts for the greater or equal number of connections with root key value from whole memory analysis. In the case of the program, it is easy to balance this error with adding new keys, as for particular values, also for interrelated oppositions scales.

Test demo app

Test demo apps is a desktop application software of algorithm inventive concept and logic design demo example, process implementation program, system module or code testing tool, created and used in the TAI lab research and workflow environment.

Inference root/ derivative noun algorithm desktop application

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