Content

Select one of the following topics:

What is . . .

Auto Mind

Semantic Net

Knowledge Base

Grammar

How To . . .

Open New Knowledge Base

Open Knowledge Base

Delete Knowledge Base

Exit

Define A Word

Teach Auto Mind

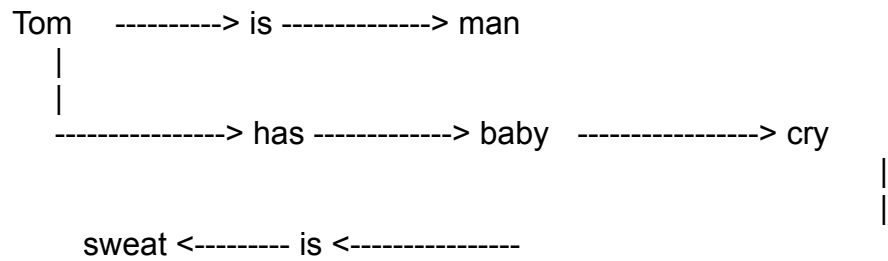Ask   Auto Mind

Auto Mind

Auto Mind is a software product which takes natural language as input and creates <u>semantic nets</u> and saves in a file as <u>knowledge base</u>. It is capable of retrieving the given information in natural language format.

Semantic Net

Semantic nets are set of linked nets that represent meaning under a certain convention . A semantic net consists of elements pointing to each other and the logical interrelation of the elements represent the meaning. The following is an example of   semantic net:

```
Tom     ----------> is --------------> man
   |
   |
    ----------------> has -------------> baby   ----------------> cry
                                                                  |
                                                                  |
         sweat <--------- is <----------------
```

 Semantic nets are represented by data structures saved in a file.

Knowledge Base

Knowledge base is set of rules and facts given represented by <u>semantic nets</u>saved in a file.

Open New Knowledge Base

To open a new knowledge base you should close all the open files and then select the following:

1 - Select File option at the top
2 - Select New option
3 - Enter the file name
4 - Click Ok

Auto Mind will create two windows, <u>read in window</u> and <u>output panel</u> . The newly opened knowledge base does not have and information and you should <u>teach Auto Mind</u> now.

Open Knowledge Base

To open an existing knowledge base do the following:

1 - Select file
2 - Select open
3 - select the file name
4 - Click Ok

Auto Mind will create two windows, <u>read in window</u>   and <u>output panel</u>

Delete Knowledge Base

To delete a knowledge base do the following

1 - Select file
2 - Select delete option
3 - Enter file name
4 - Click Ok

Exit

To exit Auto Mind do the following

1 - Select   file
2 - Select   exit

Define A Word

As the word is defined, Auto Mind will respond "I got the definition" at the output Auto Mind should recognize every word in a given sentence, so before a sentence is given you should make sure all the words of that sentence is defined. To define a word you should use the following sentence and then click the process button in the input window.

```
<word> is   noun
<word> is   name
<word>   is verb
```

Example

We would like to tell that car has engine. We know   "has"   is already known to   Auto mind as a verb, but   "car" and "engine" are not. So   we should give the following sentences.

```
car     is    noun
engine is noun
car has engine
```

Teach

Auto Mind can learn. It remembers the information given. The information is in the form of sentences and should be given from <u>read in window</u> . The given information will stay in the knowledge base currently open.

You can teach Auto Mind many things. So you can use Auto Mind as:

<u>Telephone Directory</u>
<u>Dictionary</u>
<u>Notepad</u>
<u>Helpdesk</u>

The user version can process a text file   containing sentences after another. This is called <u>Batch Processing</u> . So you can create a file with all factual sentences and enter them into the knowledge base.

Read in Window

Read in window is a window that takes the input and processes. This window is created when a knowledge base is open. So in order to use this window to give input to Auto Mind you should <u>open knowledge base</u> or <u>open new knowledge base</u>

Ask Question

Auto Mind can answer   when you ask a question. If   the answer is known, it will be printed in the <u>output panel</u> , if not an appropriate message will be printed.

Example   1

Lets say Auto Mind knows   that   "car has engine".   The following table represents   the response for any possible question regarding that fact.

Question	Answer
who has engine	car
what has car	engine

Output Panel

Output panel is a window that displays the answer of the questions, or any possible comment on informative sentences. This window   is created when a knowledge base is open. So in order to use this window to give input to Auto Mind you should <u>open knowledge base</u> or <u>open new knowledge base</u>

Use As Phone Directory

Auto Mind can take a sentence which informs of someones phone number and remembers. It can answer when it is asked about it. Remember all the words in the sentence should be known to the knowledge bases currently open .

Example   1

We would like to tell that   "Tom's   phone number is   555-1212 " . We should make   sure that all the words are known and issue   the sentence.   Later on if you ask what is   "Tom's phone number " or " what is phone number" or   " what is number " Auto Mind will give any category of answer that matches the question.

The following is   the sequence of the sentences given to Auto Mind in read in window.

Tom is name
phone is noun
number is noun

Tom's phone number is 555-1212

what is Tom's phone number
what is phone number
what is number

As you   make the scope of the answer big more will be coverd and more answer you might get.

Use As Dictionary

Auto Mind can take a sentence which gives a meaning to a word so it can be used as dictionary.

Example   1

We would like to tell that   big means large. In this case the sentence should be big means large.
But we should make sure that "big" and "large" are known as noun and "mean" is known as verb.

big   is noun
large is noun
mean is verb
big means large

Note Pad

Auto Mind can take a sentence which represents a fact and can answer when aksed about it.

Example 1

We would like to tell that car has engine. We know "has" is already known to Auto mind as a verb, but "car" and "engine" are not. So we should give the following sentences.

car   is   noun
engine is noun
car has engine

Use As Helpdesk

Auto Mind can be specialized in knowing a certain sience such as history, geography, computer programming, etc.

Batch Processing

Batch processing is putting all the sentences in a file and input them at once. To do batch processing do the following:

1 - Have your text file ready with all the sentences. You can use any editor.
2 - The extention of the text file should be txt.
3 - Have the knowledge base open.
4 - At the menu bar select Tool
5 - Then select Batch
6 - Give the file name, then click Ok button

You will see that each sentence of that file is beinbg processed.

Grammar

Auto Mind takes subset of English as the grammar. The following is the grammer   in effect.

Sentence   ----->   Dsent.
Sentence   ----->   Qsent.
Dsent   ----->   Subject   Predicate
Subject   ----->   CxNounProp
Subject   ----->   name
Subject   ----->   NameAp CxNounProp .

CxNounProp   ----->   noun   MoreNoun
MoreNoun   ----->   noun   MoreNoun
MoreNoun   ----->
Predicate   ----->   verb3   SubjC
IPredicate   ----->   verb3   SubjC
SubjC   ----->   Subject
SubjC   ----->   (any data)

Qsent   ----->   IntExpa   Predicate
Qsent   ----->   IntExpb   IPredicate
Qsent   ----->   IntExpb   DoesPhrase
DoesPhrase   ----->   DoesEx Subject verb
IntExpb   ----->   IntExpa CxNounProp
IntExpPr   ----->   IntExp
NameAp   ----->   name +   's
verb3   ----->   verb   + s
verb3   ----->   verb