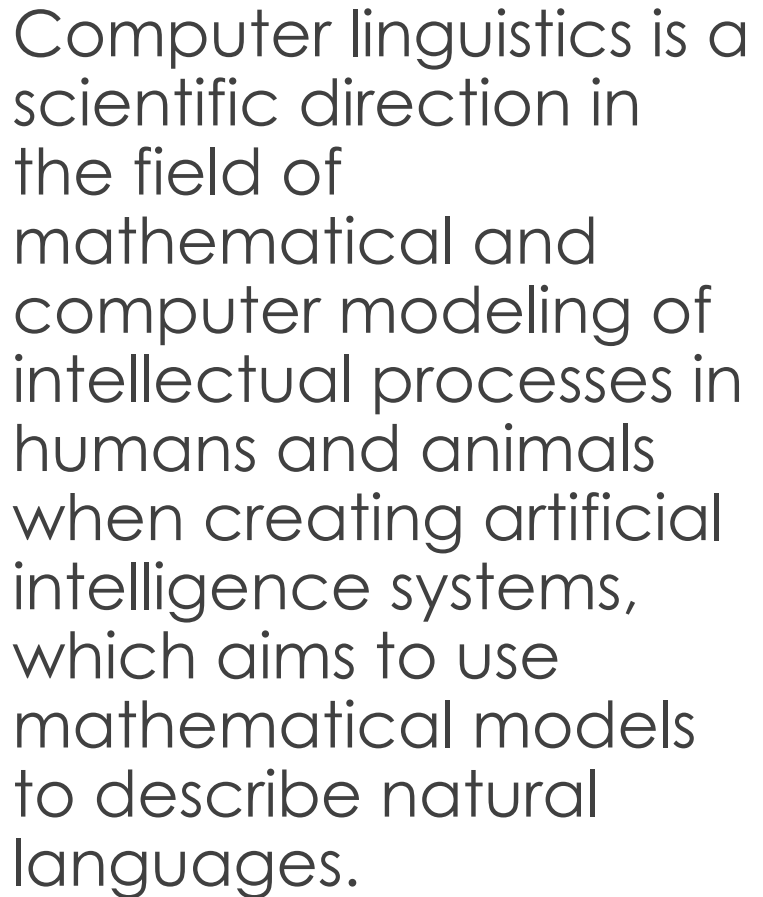




Computational linguistics

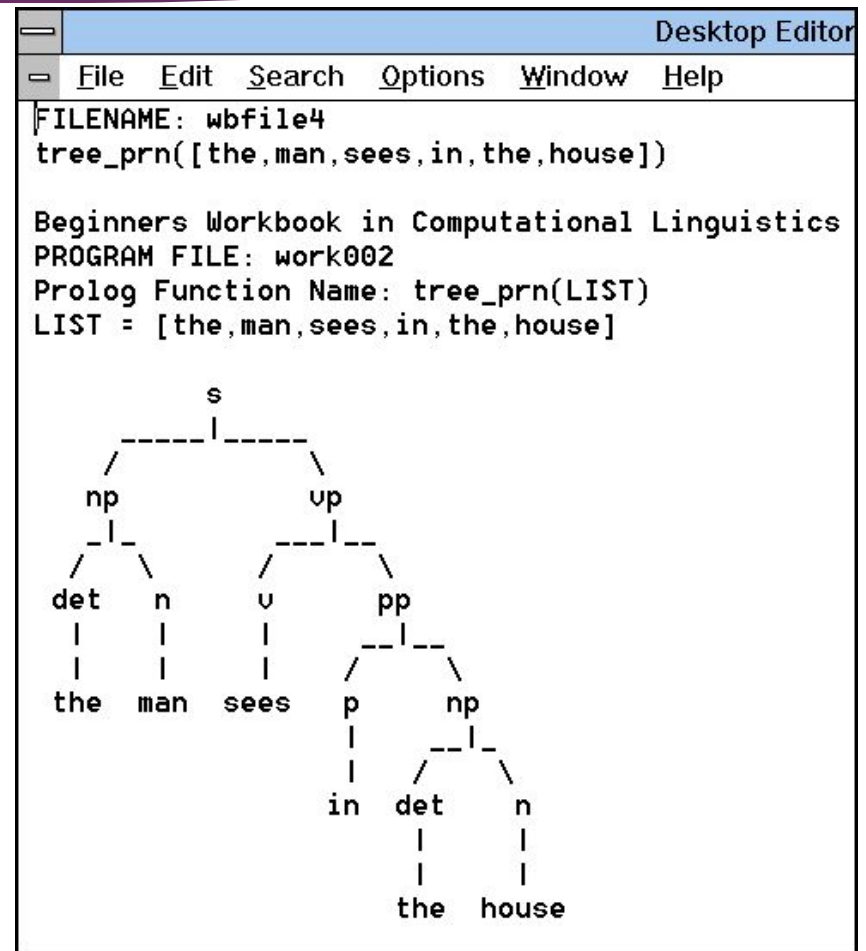
MADE BY IVAN YABLOCHKIN

100



Clarification

Modern computational linguistics is often a combination of studies in computer science and programming, math, particularly statistics, language structures, and natural language processing.



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graph TD; Applications[Applications] --- NLP[Natural language processing]; Applications --- OCR[OCR]; Applications --- ASR[ASR]; Applications --- SS[Speech synthesis];
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Applications

*Natural
language
processing*

OCR

ASR

Speech
synthesis

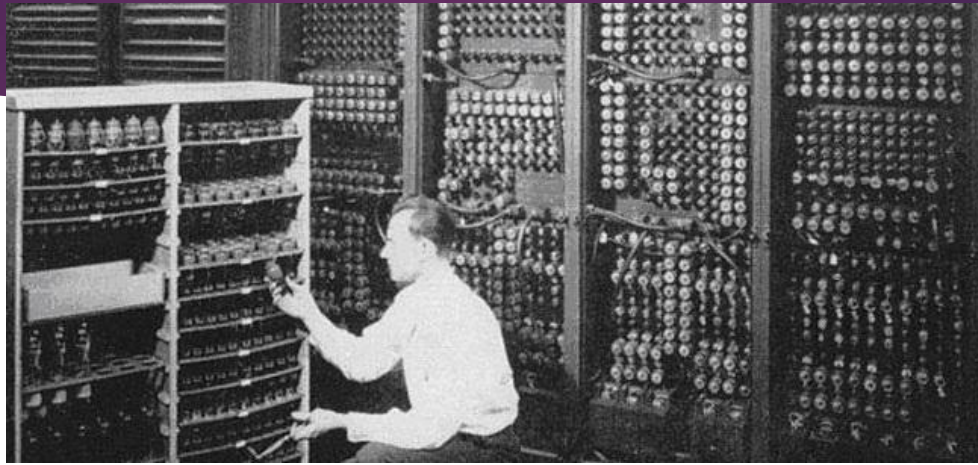
Machine translation

Definition

Computer linguistics is a scientific direction in the field of mathematical and computer modeling of intellectual processes in humans and animals when creating artificial intelligence systems, which aims to use mathematical models to describe natural languages.



History



With the invention of the transistor and the advent of a new generation of computers, as well as the first programming languages, experiments with machine translation.

First All-Union Conference on Machine Translation



From May 15 to May 21, 1958, the First All-Union Conference on Machine Translation was held at the Moscow State Linguistic University.

Rosenzweig, Victor Yulievich

Viktor Yulievich
Rosenzweig was
born in Khotin in the
family of the tenant
Joyle Haskelevich
Rosenzweig and Ita
Gershkovny
Rosenzweig.



Panoramic view of the Khotyn
Fortress.

Merits



He practically alone managed to ensure development in the USSR in 1950-1980 studies on machine translation, applied and mathematical linguistics within the framework of the numerous structures that he created.

Andreev, Nikolay Dmitrievich

Nikolai Dmitrievich Andreev is a Soviet and Russian linguist, Indo-Europeanist and orientalist, specialist in general and Indo-European linguistics, mathematical linguistics.



Merits



Yakobson on the results of the IXth International Congress of Linguists.

It is no accident that the topic "Linguistic aspects of translation" was chosen as one of the five main topics for plenary sessions. Andreev's report on this topic contained many profound and instructive observations, directions, reflections, and we can only regret the absence of a reporter whose participation could make the discussion more fruitful.

Influence on our lives



Computer linguistics allows you to instantly translate the contents of the site's page (online store), and the buyer is easier to navigate.

Easy communication

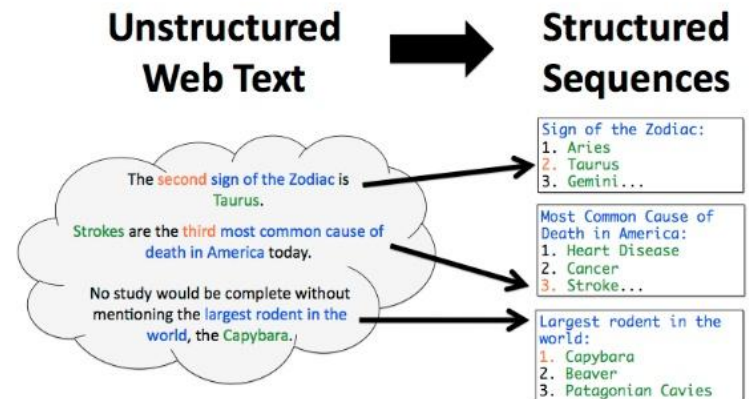


Instant translation simplifies communication between people (or between multinational companies that can reduce the cost of translators).

Organizing information

Computation linguistics simplifies the process of collecting, organizing and storing information providing optical character recognition and information extraction technologies.

What is IE?



Future prospects

Learning from experience in natural language processing is very important. The approaches to AI based on connectionism and neural networking have to specialize in this process of learning from experience.



Voice and speech recognition system



We must put lots of effort and make contribution in this area of computation. This will be a great help for the upcoming generation of human society.

Mining of the legal documents

The screenshot shows a software window titled "Annotation Results for IBM_LifeSciences.txt in C:\Program Files\IBM\uiima\docs\examples\data\processed". The window displays a text document with several paragraphs. The text is annotated with colored boxes and labels. For example, "IBM" is highlighted in blue, "John M. Thompson" is highlighted in red, and "IBM Corporation" is highlighted in red. A legend at the bottom of the window identifies the colors: Location (green), Person (blue), Car (pink), Organization (red), and DocumentAnnot... (yellow). The legend also includes checkboxes for "Location", "Person", "Car", "Organization", and "DocumentAnnot...", and buttons for "Select All" and "Deselect All".

Annotation Results for IBM_LifeSciences.txt in C:\Program Files\IBM\uiima\docs\examples\data\processed

"Life sciences is one of the emerging markets at the heart of IBM's growth strategy," said John M. Thompson, IBM senior vice president & group executive, Software. "This investment is the first of a number of steps we will be taking to advance IBM's life sciences initiatives." In his role as newly appointed IBM Corporation vice chairman, effective September 1, Mr. Thompson will be responsible for integrating and accelerating IBM's efforts to exploit life sciences and other emerging growth areas.

IBM estimates the market for IT solutions for life sciences will skyrocket from \$3.5 billion today to more than \$9 billion by 2003. Driving demand is the explosive growth in genomic, proteomic and pharmaceutical research. For example, the Human Genome Database is approximately three terabytes of data, or the equivalent of 150 million pages of information. The volume of life sciences data is doubling every six months.

"All of this genetic data is worthless without the information technology that can help scientists manage and analyze it to unlock the pathways that will lead to new cures for many of today's diseases," said Dr. Caroline Kovac, vice president of IBM's new Life Sciences unit. "IBM can help speed this process by enabling more efficient interpretation of data and sharing of knowledge. The potential for change based on innovation in life sciences is bigger than the change caused by the digital circuit."

Among the life sciences initiatives already underway at IBM are:

- DiscoveryLink* -- For the first time, researchers using this combination of innovative middleware and integration services can join together information from many sources to solve complex medical research problems. DiscoveryLink creates a "virtual database" that permits data to be accessed and extracted from multiple data sources used in research and development projects. This IT solution can dramatically improve product cycle time and lower development costs for pharmaceutical, biotechnology and agri-science

Click In Text to See Annotation Detail

Person ("John M. Thompson")

- begin = 92
- end = 106

Legend

☐ Location ☒ Person ☐ Car ☒ Organization ☐ DocumentAnnot...

Select All Deselect All

The Future

NEXT EXIT 