AI FIRM 2000 XILP-ATROPERSON DO SOLVENSE TOURINGS Predicate Augument Shucture, (Meaning Representation (NZ -Systems, Software imprinquel imprioress o everlas es ow OPI / of Calate Mi Shuckeral Syndia 17 moanise 1) Predicate Agument Shucture: Predicate Argument shudine is a tey concept in NCP. · It focuses on the relationship between Predicate (verb) and Agaments (Subject, Object) _ · It helps in Semantic labeling, Machines translation, Information entraction as in ed side one · Here's the breakdown of key concept ? how commend Det? The man action in the sentence is clesarised by a heap ac heap bhote Eg: She ate on apple, stris an predicate in dimonded around normon det: The people involved in the arction. Types of Asguments. Subject: The one doing Action object: The thing receiving the action an apple Indirect object: The one who benifits hom a chon him in she gave him an apple

Adjuncts: Ficha details like time, place or manner! Ex: In the morning in the ate on apple in the non 3. Semantic Rule 1- 300 mm 10 printing

defr: The labour which clesuible the function of each argument convert un walnud southpo sitt

Common Rules! - 11 Doll roll roll founds

Agent: The entity performing action

Theme: The thirty affected by The action

Expeniencus: The one Kelling something

Benificiery: The one who getting benifit hom action

Instrument: The tools and for the achon.

Panning PAS' & From on no roum sup with a mile

" Methods ?

- · Kule-based: Uning grammes rules to hind the parting 2) Component! the sentence
- · Machine learning: Unny Statistical computer orga recognize patterns in sentence, and po
- · Newal networks? Using advanced Al models to cenderstand sentencer soons ago and its

Applications of Pas

Days kno and · Semantic Role Labeling (SRC): It help are to underland contence better by knowing 1) James Nichoon 159 who is doring what. atch wages a equili

1911 mort-lor

- Information Entraction
- Machine Translation
 - · Querton Answering

20012 3

. Proprank and Framewet

· Spacey and Allen NCP

- 2) Meoning Representation Systems to a word who will
- · Meaning Representation Systems one and for Capturing the meaning of rentences on tent in a way that computer can understand and process.
- This systems translate the human language into a Shuctured format that reflects the meaning of relationships between thom- different ponts of the feet.
 - · Hair, asimple breakabound i lostolla parint will a servet Experiences: The one lating something
- 1) Aur pose ?

MRS aims to convert the natural language into a form that a computer can unclusified the fext of perform tests like quephon answering & translating languages or summariting information. have - based : Diricy grann

2) Components.

Entities? Objects or concepts mentioned in the fent eg. John, applyin in malling Himpath of the

Robotionships: How there entities one connected eg: John eats on apple' shows on relationship between Applications of Ras. John and apple. a product of story among.

3) Representation methods?

1) Semantic Networks: user nodes 5 edges relationships entities

Gr (Jon n) edts (Spple)

Frames? Aills The detailsof a particula rifuation of Francis E

05:-" baying" frame includy all the thetails of who bought.

9 Sto noth bow 1. Dec

3) Kogical Forms: you captures The maning Cgi- Cat (John, apple) to represent John latt an apple political It includes subject,

Sets of allributes of their ralues to desaible envites and rewinships

object, and tense

most ballon

4) Feature Shuctures

Michael Chids Conduiting Country Country Colonia Colonia -Application:

- 1) Duection Answering 2) Machine Translation
- 3) Tent Summan Zehbn

3) Software in NLP 716, 9016 It refer to the tools, librarile , and frameworks derigned to help developers build application that can industand, interpret and generate human languages.

Papalas NLP Cibraries and Francisosts; 10)

- NLTE (Natural Conquege toolkit)? Privipor bus
 - Most widely used library for NLPin Python
 - Features: Toknization, pourry, Stemming, tagging, clamification and semantic reasoning. The bon dute
 - Use Cases? Educational purpose, segreanch, basic NEP. 1. Park - Bard - Systems: fasks. 2) Spacy: White besigning poly is injuly
 - - It is also a library offerigned for performance and lare of we.
 - Features? Fast tokenization, past-of-speech tagging, named entity recognition, dependency parting, pre-trained if hereal fronting mills word rectors.
 - Use cases? Lange-scale NLP Projects, productionlevel applications. Most magney integrated A .: []

rusty et was nuclion lest ential kno sometich

E) Legical form . 3) Standford NLPS 4) Gensim will the 7) Hugging Face Transformers NLP Cloud search I. Googu cloud Natural Carquage API 2. Microsoft Azuse Congnitive Services (Tent Analysisa) 3. Amazon Comprehendings principally normally prido fevermone 1: Specialized took 1) CoreNLP 2) OpenNLP 3) fast Tent montos 4) What are system paradigms in predicates? Explain In NLP System panadigms typically refers to different frameworks or approaches for analyzing and processing predically within sentence. Preducate are evential parts of sentences that express an action, state ion relation and typically include verb and it complements - Common paradigm, 2139 de lasothanus 1 1000 200 1. Rule-Bard Systems: - Uses a set of predefined rules to identify the predicte Egr. The dog banks with planting property Usually a predicate 2. Statistical and Machine learning Approachers - Uses patterns learned from lots of examples to identify predicate. Eg: A computer program looks at thousands of sentences and learns that certain words often

act as predicates. Then, it can guess predicate in a new sentence.

1) :0012 mg

- 3. Deep Learning Moculs?
- Uses complex algorithms that minic human language brain to understand language.
 - Tools like BERT read sentences and understand the content to figure out which part is the predicate, even in hickey sentences. 4. dependency pointing: bollood i Josith of

 - Analytes the grammatical structure of schlences to - yind how words are related.
 - tg: The cost site on the mat,

It piguses out that sits is the main action (predicate) because now ills connected to cat s " on the mat" tg. The day booked logally

T. Semantic Role (abeling (SRL):

Identify the predicate and labels other points of the Sentence to show their roles. ent willow but eg: In The chef cooked a meal, "it identifies," cooked as the predicate and labels "The chieft" are the does and i'a meal as what is being cooked. Wordwarier about the subject instructed

. The production is just - for more vood or deap promise withing the factorial

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7) Difference between Predicate and Predicator.

I. Predicate:

- Predicate is a part of a sentence that thus wo whom
The subject does or what is done to the subject.

The typically includes the verb and everything that

Tollows it.

Ellion Comming Mounts

. Hind how coard are retruted.

Fig. "The dog banked loudly." It includes the verb "banked" and the adverb "loudly".

2. Predicator.

- The predicator is specially the main verb or verb

phrase within the predicate the is the core of the

predicate that expresses the action or state of the

subject.

that cousier the action,

lay Differences & losm a belood job entire pour

"Scope " gure and " elsoid how they bend on a

- The predicate encompasser everything that provider information about the subject including the verb, Object and modifiers.
- The predicator is just the main unob or verb phrase within the predicate.

Function:

- The predicate provider a complete description of what the subject is doing or emperiencing
- The predicator is the central eliment that directly expressed the action or state.

Frampler:-

- 1) Simple sentance: She runs
 predicate: runs, predicator: runs
- 2) Complex Sentence: The cat is sleeping on the mat predicate: is sleeping on the mat predicator: sleeping.