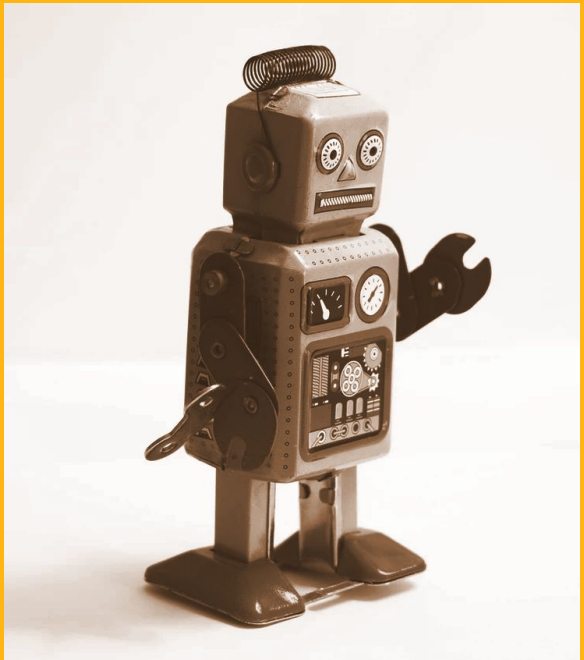


Talking Like Humans:

An Introduction to Conversational Interfaces

1.3.2019 Avoin data ja tekoäly - Avoimen tiedon verkoston tapaaminen
Turku

Michael Stormbom,
Key Account Manager

Lingsoft®
30
YEARS OF LEADING LANGUAGE MANAGEMENT

Lingsoft®

Lingsoft is a full service language company

Founded in 1986

Revenue ~12 M€

150+ employees

500+ partners

Language services: almost 1000 end customers

Language technology solutions: tens of millions of end users

Language digitalisation solutions: discoverability and text analysis, accessibility and digital services, productivity and process automation, semantic interoperability

Language services: translations, transcription, terminology management, content production, toimialaseuranta

Lingsoft®

Microsoft

VALTION-
HALLINNON
PUITESOPIMUS-
TOIMITTAJA

IBM®

Adobe®

BONNIER
News

SCHIBSTED
MEDIA GROUP

yle

svt

TURKU

OPETUSHALLITUS

Väestörekisterikeskus

VALTIONEUVOSTON KANSLIA
STATSRÅDETS KANSLI | PRIME MINISTER'S OFFICE

SITRA

THL

Aalto-yliopisto

PLANMECA

AGFA
HealthCare

CGI

OLYMPUS
Speech Documentation Solutions
Certified Partner 2017

AURIA
BIOPANKKI

HUS

Solutions on all levels of language

Speech
speech recognition
speech synthesis
pronunciation

Word
indexing
spell checking
hyphenation

Sentence
grammar checking
style checking

Text
classification
translation

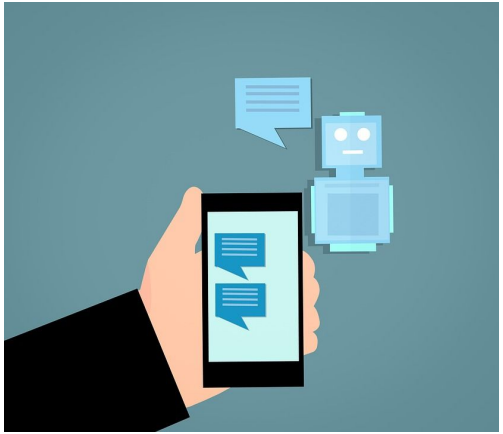
Meaning
annotation
keywording
ontologies
sentiment analysis

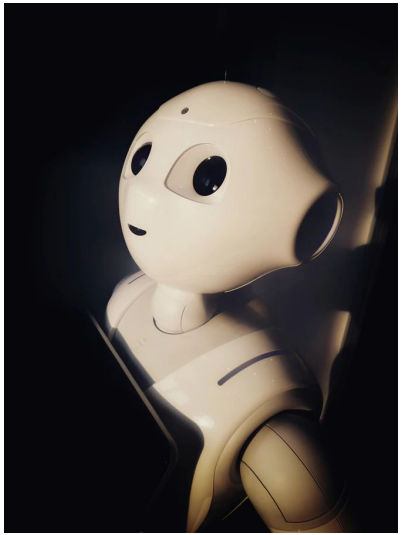
Accessibility
Discoverability
Productivity
Multilingualism
Interoperability

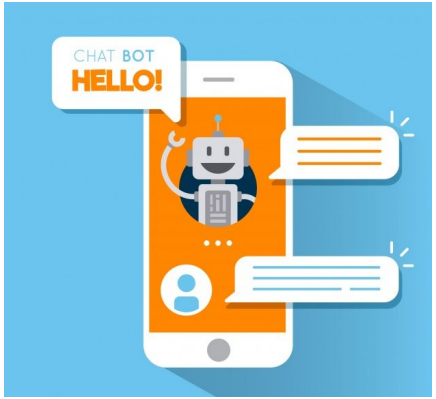
Lingsoft®

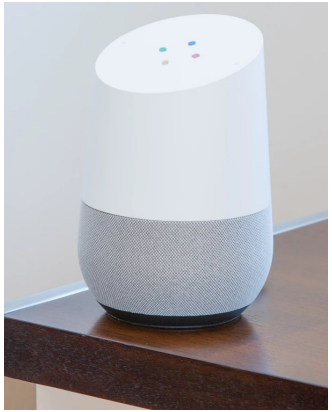
Conversational interfaces

Lingsoft®

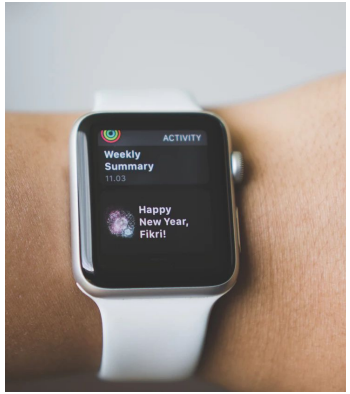


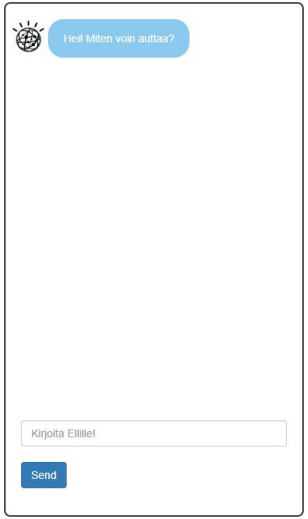



CHAT BOT
HELLO!



15:56


ACTIVITY
Weekly Summary
11.03
Happy New Year, Fikri!


Heil Miten voin auttaa?
Kirjoita Ellille!
Send

Lingsoft®

```
Welcome to
                    EEEEEE  LL      IIII  ZZZZZZZ   AAAAA
                    EE      LL       II       ZZ   AA   AA
                    EEEEE   LL       II     ZZZ    AAAAAAA
                    EE      LL       II    ZZ      AA   AA
                    EEEEEE  LLLLLL  IIII  ZZZZZZZ  AA   AA

Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.


ELIZA: Is something troubling you ?
YOU:   Men are all alike.
ELIZA: What is the connection, do you suppose ?
YOU:   They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
YOU:   Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here ?
YOU:   He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU:   It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy ?
YOU:
```

Screenshot from https://en.wikipedia.org/wiki/ELIZA

BAR
KAFE

KAILEY
Hi friend! Long time no see
Are you free next weekend? Let's meet!
Wait a sec. Let me check first
Yeah, I'm free!

Lingsoft®

3+ Billion USD

market by 2023*

8 Billion USD

cost reduction by 2022**

*** Allied Market Research, Mordor Intelligence and others**

**** Juniper Research**

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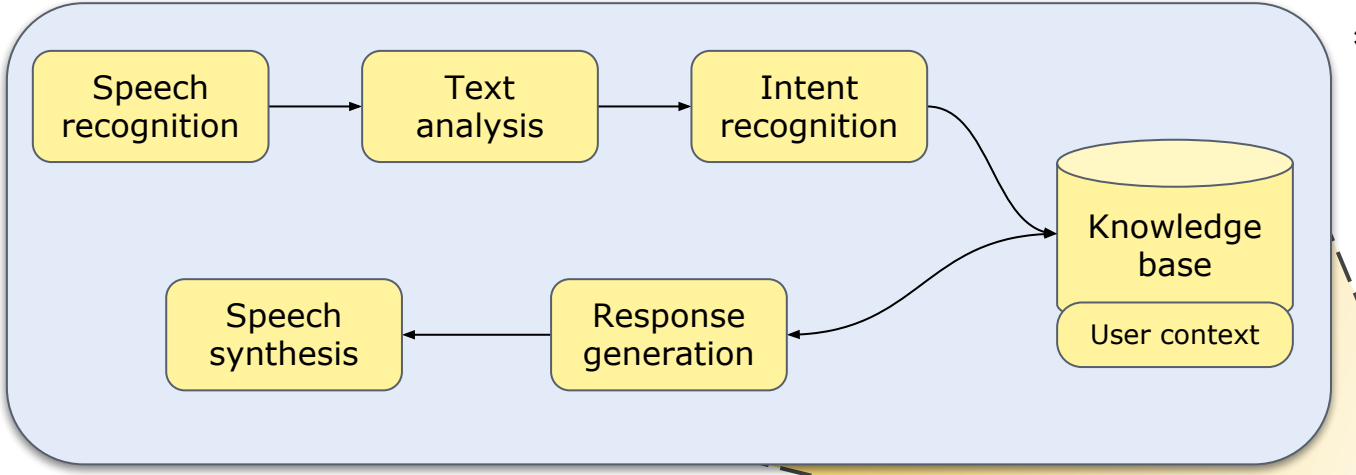
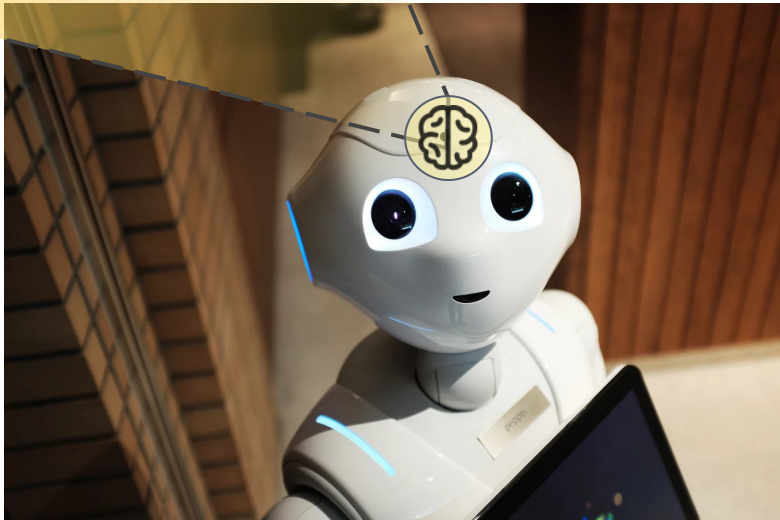


*



* for example

Speech to text

I slutet av januari hade Oskarshamn upp mot 10,3 plusgrader och det ser ut som att vi kan slå det rekordet nu idag när vi ha

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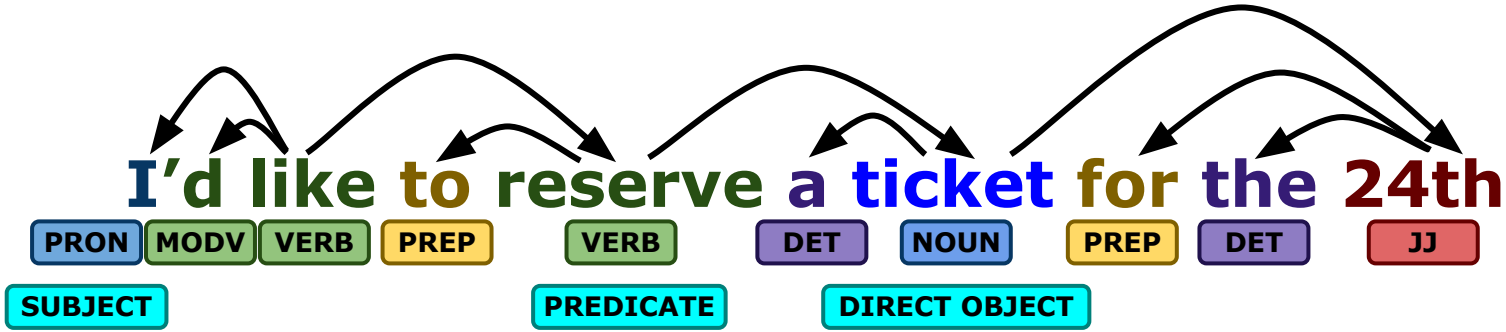
LANGUAGE MANAGEMENT

Lingsoft®

Recognising intent




```
{ intent: reserve
  object: ticket
  when: 2019-03-24
  subject: Michael }
```

Lingsoft®

sanaltakaan, sanallekaan, sananakaan, sanaksikaan, sanattakaan, sanoineenkaan, sanoinkaan, sanako, sananko, sanaako, sanassako, sanastako, sanaanko, sanallako, sanaltako, sanalleko, sananako, sanaksiko, sanattako, sanoineenko, sanoinko, sanasikaan, sananikaan, sanansakaan, sanammekaan, sanannekaan, sanaanikaan, sanaankaan, sanaansakaan, sanaammekaan, sanannekaan, sanassanikaan, sanassasikaan, sanassansakaan, sanassammekaan, sanassannekaan, sanastanikaan, sanastasikaan, sanastansakaan, sanastammekaan, sanastannekaan, sanallanikaan, sanallasikaan, sanallansakaan, sanallammekaan, sanallannekaan, sanananikaan, sananasikaan, sananansakaan, sananammekaan, sananannekaan, sanaksenikaan, sanaksesikaan, sanaksensakaan, sanaksemmekaan, sanaksennekaan, sanattanikaan, sanattasikaan, sanattansakaan, sanattammekaan, sanattannekaan, sanoinesikaan, sanoinensakaan, sanoinemmekaan, sanoinennekaan, sanasiko, sananiko, sanansako, sanammeko, sananneko, sanaaniko, sanaasiko, sanaansako, sanaammeko, sananneko, sanassaniko, sanassasiko, sanassansako, sanassammeko, sanassanneko, sanastaako, sanastasiko, sanastansako, sanastammeko, sanastanneko, sanallaniko, sanallasiko, sanallansako, sanallammeko, sanallanneko, sanananiko, sananasiko, sananansako, sananammeko, sanananneko, sanakseniko, sanaksesiko, sanaksensako, sanaksemmeko, sanaksenneko, sanattaniko, sanattasiko, sanattansako, sanattammeko, sanattanneko, sanoineniko, sanoinesiko, sanoinensako, sanoinemmeko, sanoinenneko, sanankaanko, sananikaanko, sanansakaanko, sanammekaanko, sanannekaanko, sanaanikaanko, sanaasikaanko, sanaansakaanko, sanaammekaanko, sanaannekaanko, sanassanikaanko, sanassasikaanko, sanassansäkäänkö, sanassammekaanko, sanassannekaanko, sanastanikaanko, sanastasikaanko, sanastansakaanko, sanastammekaanko, sanastannekaanko, sanallanikaanko, sanallasikaanko, sanallansakaanko, sanallammekaanko, sanallannekaanko, sanananikaanko, sananasikaanko, sananansakaanko, sananammekaanko, sananannekaanko, sanaksenikaanko, sanaksesikaanko, sanaksensakaanko, sanaksemmekaanko, sanaksennekaanko, sanattanikaanko, sanattasikaanko, sanattansakaanko, sanattammekaanko, sanattannekaanko, sanoinenikaanko, sanoinesikaanko, sanoinensakaanko, sanoinemmekaanko, sanoinennekaanko, sananikokaan, sanasikokaan, sanansakokaan, sanammekokaan, sanannekokaan, sanaanikokaan, sanaasikokaan, sanaansakokaan, sanaammekokaan, sanaannekokaan, sanassanikokaan, sanassasikokaan, sanassansakokaan, sanassammekokaan, sanassannekokaan, sanastanikokaan, sanastasikokaan, sanastansakokaan, sanastammekokaan, sanastannekokaan, sanallanikokaan, sanallasikokaan, sanallansak kokaan, sananasikokaan, sananansakokaan, sananam

Pyyhkäisyeletronimikroskoopillaankohan

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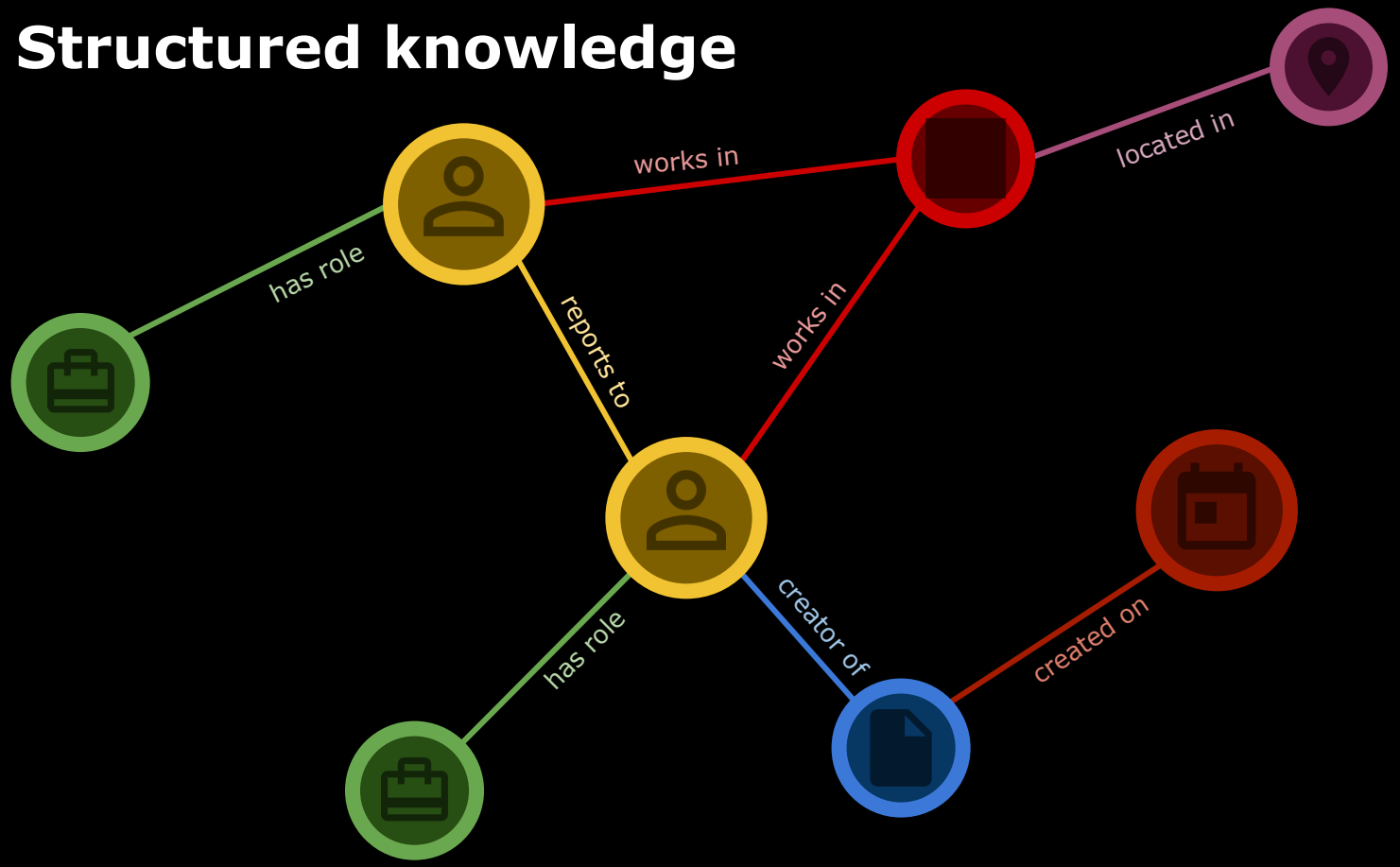
Structured knowledge



Natural Language Generation

Lingsoft

Better UX?

Hi! How can I be of assistance?

i wanna book a ticket

I'm sorry, I don't understand.
Could you rephrase?

Please guess what the bot is able to understand:

??? Send

Hi! How can I be of assistance?

Please select one:

Book a ticket

Change a reservation

Cancel a reservation

Send

Bias

Privacy?

UP TO 70 % OFF

ISLANDS

OPEN

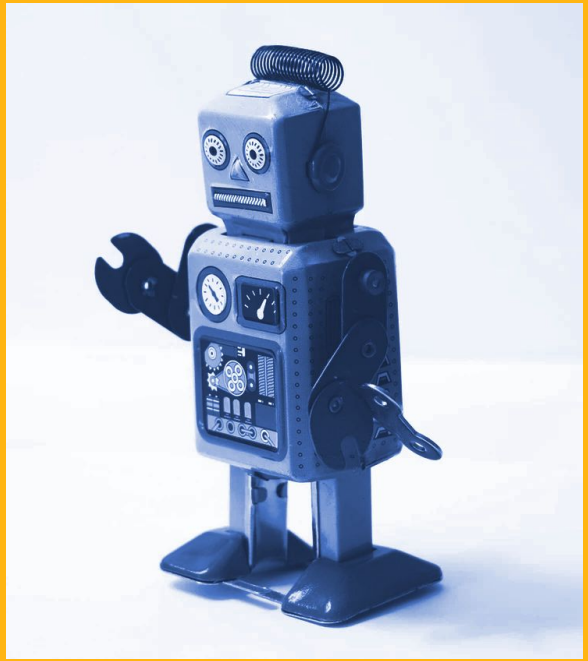
?

Lingsoft®

Thank you!

www.lingsoft.fi
michael.stormbom@lingsoft.fi
@mickestormbom

Eteläranta 10, 00130 Helsinki

Kauppiaskatu 5, 20100 Turku

+358 2 2793 300