

Przetwarzanie języka naturalnego w systemach sztucznej inteligencji

Projekt nr 3

AGH Wydział Elektrotechniki, Automatyki, Informatyki i Inżynierii
Biomedycznej

Autorzy

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1. Opis Projektu

1. Zbieranie danych wejściowych

- Użytkownik jest proszony o podanie dwóch czasowników. Program sprawdza, czy podane czasowniki znajdują się w słowniku **verbs**, który zawiera podstawowe formy czasowników oraz ich różne odmiany (np. przeszłe i imiesłowy).

2. Przygotowanie tekstu

- Program przeszukuje wszystkie pliki tekstowe (.txt) znajdujące się w określonym folderze. Tekst z tych plików jest odczytywany i przygotowywany do analizy. Zawiera to usunięcie znaków interpunkcyjnych, co pozwala na skupienie się wyłącznie na słowach.

3. Wyszukiwanie słów po czasownikach

- Dla każdego z dwóch zadanych czasowników program przeszukuje tekst, aby znaleźć wszystkie słowa, które występują bezpośrednio po tych czasownikach.

4. Zbieranie wyników

- Program zbiera wszystkie unikalne słowa, które pojawiają się po każdym z dwóch czasowników, a następnie tworzy zbiór wyników.

5. Prezentacja wyników

- Po przetworzeniu tekstów program może wyświetlić wyniki w czterech sekcjach:
 - Rzeczowniki występujące po pierwszym czasowniku.
 - Rzeczowniki występujące po drugim czasowniku.
 - Suma wszystkich znalezionych rzeczowników.
 - Część wspólna rzeczowników po obu czasownikach.

6. Interfejs użytkownika

- Program działa w trybie tekstowym, gdzie użytkownik wprowadza dane przez terminal.

2. Lista czasowników

Infinitive	Past Simple	Past Participle
be	was/were	been
have	had	had
do	did	done
say	said	said
go	went	gone
get	got	gotten
make	made	made
know	knew	known
think	thought	thought
take	took	taken
see	saw	seen
come	came	come
want	wanted	wanted
look	looked	looked
use	used	used
find	found	found
give	gave	given
tell	told	told
work	worked	worked
call	called	called
try	tried	tried
ask	asked	asked
need	needed	needed
feel	felt	felt
become	became	become
leave	left	left

put	put	put
mean	meant	meant
keep	kept	kept
let	let	let
begin	began	begun
seem	seemed	seemed
help	helped	helped
talk	talked	talked
turn	turned	turned
start	started	started
show	showed	shown
hear	heard	heard
play	played	played
run	ran	run
move	moved	moved
like	liked	liked
live	lived	lived
believe	believed	believed
hold	held	held
bring	brought	brought
happen	happened	happened
write	wrote	written
provide	provided	provided
sit	sat	sat
stand	stood	stood
lose	lost	lost
pay	paid	paid
meet	met	met
include	included	included

continue	continued	continued
set	set	set
lear	learned/learnt	learned/learnt
change	changed	changed
lead	led	led
understand	understood	understood
watch	watched	watched
follow	followed	followed
eat	ate	eaten
create	created	created
speak	spoke	spoken
read	read	read
allow	allowed	allowed
add	added	added
spend	spent	spent
grow	grew	grown
open	opened	opened
walk	walked	walked
win	won	won
offer	offered	offered
remember	remembered	remembered
love	loved	loved
consider	considered	considered
appear	appeared	appeared
buy	bought	bought
wait	waited	waited
serve	served	served
die	died	died
send	sent	sent

expect	expected	expected
built	built	built
stay	stayed	stayed
fall	fell	fallen
cut	cut	cut
reach	reached	reached
kill	killed	killed
remain	remained	remained
suggest	suggested	suggested
raise	raised	raised
pass	passed	passed
sell	sold	sold
required	required	required
report	reported	reported
decide	decided	decided
drink	drank	drunk

3. Przykładowe działanie programu

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

tries, day, water, other, blood, chocolate, first, something, notice, devil

Rzeczowniki po czasowniku 2:

day, eggs, south, one, fish, daily, fear, chocolate, food, animal, apple, man, stale, everything, yer, followers, grass, myself, peace, meat, amounts, bread, reduce, japan, shelter, turkey, them, meals, breakfast, far, oats, ice, corn

Suma rzeczowników:

day, eggs, oats, south, one, fish, daily, fear, chocolate, food, apple, corn, notice, tries, water, man, stale, something, everything, yer, followers, grass, myself, peace, meat, amounts, bread, reduce, japan, first, shelter, turkey, other, blood, them, meals, breakfast, far, animal, ice, devil

Część wspólna:

day, chocolate

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

ginger, tis, spell, building, millions, wornout, course, pony, five, two, mr, john, wand

Rzeczowniki po czasowniku 2:

city, improved, cars, own, building, themselves, apartment, skyscrapers, yet, bones, low, nicolasjoseph

Suma rzeczowników:

tis, improved, millions, themselves, course, pony, skyscrapers, yet, bones, mr, low, nicolasjoseph, city, ginger, spell, building, cars, own, wornout, apartment, five, two, john, wand

Część wspólna:

building

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

flute, knees, hair, yourself, trace, end, own

Rzeczowniki po czasowniku 2:

john, wand, tis, two, wornout, mr, ginger, spell, five, millions, course, pony

Suma rzeczowników:

john, flute, tis, two, wornout, ginger, yourself, end, wand, pony, mr, hair, spell, five, millions, knees, trace, course, own

Część wspólna:

Brak wyników

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

villagers, mind, hell, desk, puzzlement, decoration, one, dear, rules, food, subject, plan, maybe, hands, color, sleeping

Rzeczowniki po czasowniku 2:

horse, time, unclean, one, sir, himself

Suma rzeczowników:

villagers, desk, one, subject, plan, maybe, hands, himself, horse, mind, puzzlement, time, decoration, unclean, dear, rules, food, sir, hell, color, sleeping

Część wspólna:

one

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

snape, harrys, percy, birds, gorilla, norbert, owl, horror, cat, goblin, birthday, hagrid, malfoy, television, quirrell, girl, harry, bated, recognized, professor, unwrap, redhaired

Rzeczowniki po czasowniku 2:

losing, little, brass, forth, hed, white, gryffindors, factories, scales, ourselves, last, cabs, upon, boa, myself, tis, drawing, time, traffic, stairs, against, home, child, affairs, glass, drivers, carriage

Suma rzeczowników:

snape, harrys, losing, little, brass, percy, birds, forth, gorilla, hed, norbert, owl, white, gryffindors, factories, horror, cat, goblin, scales, birthday, hagrid, ourselves, last, malfoy, cabs, upon, glass, television, quirrell, boa, myself, tis, drawing, girl, harry, bated, time, traffic, recognized, stairs, against, home, child, professor, unwrap, affairs, drivers, carriage, redhaired

Część wspólna:

Brak wyników

Wyszukiwarka Rzeczowników

Rzeczowniki po czasowniku 1:

class, cloak, yourself, two, gryffindor, foot, stone, admirable, receiver, nose, meal, wand, harry, inside, cat, heads, anything, outside, bed, saddle, hopefully, hand, another, checkrein, jerry, money, something, end, lord, captain, harrys, pointed, straw, one, plates, charms, arm, horses, bottle, photos, wife, rein, face, stop, hagrids, merrylegs, hedwig, straps, robes, head, slytherin, hermione

Rzeczowniki po czasowniku 2:

dick, somethin, cant, miss, someone, snape, hagrid, pointing, other, harry, seamus, woods, snake, price, questions, dear, oh, urgently, aunt, ing, looking, spells, hed, ron, jerry, madam, sticking, something, leading, shrilly, once, one, saw, wood, percy, question, fred, anymore, dumbledore, servant, conductor, hermione, man, trying, mr, hoping, hundreds, parents

Suma rzeczowników:

dick, cloak, yourself, foot, stone, receiver, nose, wand, other, harry, seamus, heads, snake, price, questions, urgently, bed, aunt, hopefully, looking, another, spells, hed, something, jerry, ron, sticking, shrilly, pointed, one, plates, charms, arm, horses, bottle, photos, wife, rein, face, question, anymore, hagrids, servant, hedwig, man, head, trying, hoping, hundreds, hermione, class, somethin, cant, miss, someone, snape, two, hagrid, gryffindor, pointing, admirable, meal, inside, woods, cat, anything, outside, dear, oh, saddle, ing, hand, checkrein, madam, money, leading, end, lord, captain, harrys, straw, once, saw, wood, percy, fred, dumbledore, stop, merrylegs, conductor, straps, robes, slytherin, mr, parents

Część wspólna:

one, harry, jerry, something, hermione

Wyszukiwarka Rzeczowników

understand

fall

Szukaj

Rzeczowniki po czasowniku 1:

secrets, importance, hell, harry, muggle, horses, professor, snape, jerrys, beauty, business, course, other, later, agree

Rzeczowniki po czasowniku 2:

flinging, marcus, harry, quirrells, asleep, halloo, leaves, violence, malfoy, reuben, whether, blantyre, flat, promised, owing, trading, loose, backward, onto, bed, gripped, books, seemed, blackness, ahern, leaned, thirtysix, has, quirrell, upon, although, mortally

Suma rzeczowników:

secrets, flinging, marcus, harry, quirrells, asleep, course, halloo, leaves, violence, malfoy, reuben, importance, snape, whether, professor, blantyre, flat, promised, owing, trading, loose, later, backward, onto, agree, bed, gripped, books, seemed, blackness, horses, business, ahern, beauty, leaned, thirtysix, hell, has, muggle, quirrell, jerrys, other, although, upon, mortally

Część wspólna:

harry

Źródła

Harry Potter:

<https://docenti.unimc.it/antonella.pascali/teaching/2018/19055/files/ultima-lezione/harry-potter-and-the-philosophers-stone>

Black Beauty:

<https://www.defence.lk/upload/ebooks/Black%20Beauty.pdf>

Bajki dla dzieci:

<https://andonovicmilica.wordpress.com/wp-content/uploads/2018/10/english-fairy-tales.pdf>

Food Article:

<https://education.nationalgeographic.org/resource/food/>

Car Article:

<https://kids.britannica.com/kids/article/car/352807>

City Article:

<https://www.english-online.at/geography/cities/cities-and-metropolitan-areas.htm>