

NLP

Introduction to NLP

Examples of Text

Understanding a News Story

Brazil crowds attend funeral of late candidate Campos

More than 100,000 people in Brazil have paid their last respects to the late presidential candidate, Eduardo Campos, who died in a plane crash on Wednesday.

They attended a funeral Mass and filled the streets of the city of Recife to follow the passage of his coffin.

Later this week, Mr Campos's Socialist Party is expected to appoint former Environment Minister Marina Silva as a replacement candidate.

Mr Campos's jet crashed in bad weather in Santos, near Sao Paulo.

Investigators are still trying to establish the exact causes of the crash, which killed six other people.

Mr Campos's private plane - a Cessna 560XL - was travelling from Rio de Janeiro to the sea-side resort of Guarujá, near the city of Santos.

President Dilma Rousseff, who's running for re-election in October, was among many prominent politicians who travelled to Recife for the funeral.

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Why did I highlight some of the phrases above?

Answer to the quiz

- Brazil crowds attend funeral of late candidate Campos
 - Current event
- Mr Campos's jet crashed in bad weather in Santos
 - Background event
- Mr Campos's Socialist Party is expected to appoint...
 - Speculation
- President Dilma Rousseff
 - Property
- They attended a funeral Mass
 - Pronominal reference to an entity in a previous sentence

Genres of Text

- Blogs, emails, press releases, chats, debates, etc.
- Each presents different challenges to NLP

Do you think that schools should provide more help to developmentally challenged

First time here? [Show Helpful Hints](#)

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Do you think that schools should provide more help to developmentally challenged

Schools have some programs, but should they have more things to help them.

yes they should
Side Score: 1

vs

what they are doing is fine
Side Score: 2

Debate Info

Debate Score: 2
Argument Score: 3
Total Votes: 3
More Stats

Argument Ratio

yes they should (1)
what they are doing is fine (2)

Debate Creator

1 day ago | Side what they are doing is fine

Support Dispute Clarify
1 Hide Replies

Alfred1356 (2) 1 point

Public schools should teach behavioral skills and give the mentally challenged listening exercises. Every student deserves to be given education, and these kinds of students shouldn't be left out.

The students will need to be able to speak full words and make full sentences. They need to be able to communicate clearly with others. To start off, this is what they need. Mentally challenged are mentally challenged because they cannot process information as quickly or as accurately as others and have trouble forming words. If you focus on their speech, they will progress what they are saying and will try to understand things. I robbed an Indian who had this condition in my grade school. There were assistants guiding her around the school and giving her full sentences on what she wanted to do. She could not understand them. She was constantly moaning and groaning every day and could not say anything she wanted to say. Her teachers struggled, but she didn't know what they were feeling. The school needs to provide her with more opportunities of English and give her basic lessons in pronunciation. She needs comfort and she needs language. This was what she needed because she could never even try to understand the teachers.

As the mentally challenged pupil grows in English, the teachers will need to give them some sort of daily lesson. Every student learns math, science, English, and social studies. How about provide the mentally challenged with these things? Of course, but, uh, how?

A very good strategy is giving them audio. Do not try to give written work. That should be provided after they have listened to whatever audio mathematics lesson or English lesson. When the mentally challenged start speaking normally, the teachers should give them written work. They will be accustomed to the language and now need to be taught to read and write. This time, though, it will not be hard. They will know most of the words and will learn to say them aloud as they have learned from the audio lessons.

Alfred1356 (2) 1 point

I agree, I think it's a disgrace to physically place people somewhere where they're are automatically looked at as stupid and retarded. Most of the time they won't want your classes if they are given 0 legitimate respect. I even believe that they should lower the "help" the mentally challenged people, especially mentally challenged people want freedom, more than most things in life, not having to be restricted by everything. If you get into a "special" class, what career options will you have in life. At that rate of learning, little to none. In my middle school, I had the most advanced classes. Two kids in my class, both with down syndrome, were the greatest readers, with the highest grades in the school. There is no reason for mentally disabled children to get more "support" than they already have.

W. Tony Blair - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Tony_Blair

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Tony Blair

From Wikipedia, the free encyclopedia

For other uses, see [Tony Blair \(disambiguation\)](#).

Anthony Charles Lynton Blair (born 6 May 1953)^[1] is a British Labour Party politician who served as the **Prime Minister of the United Kingdom** from 1997 to 2007. He was the **Member of Parliament (MP)** for Sedgefield from 1983 to 2007 and **Leader of the Labour Party** from 1994 to 2007. Blair led Labour to a landslide victory in the 1997 general election, winning 418 seats, the most the party has ever held. The party went on to win two more elections under his leadership: in 2001, in which it won another landslide victory, and in 2005, with a reduced majority.

Blair was elected Labour Party leader in the leadership election of July 1994, following the sudden death of his predecessor, John Smith. Under his leadership, the party used the phrase "New Labour" to distance it from previous Labour policies. Blair declared opposition to the traditional conception of socialism, and declared support for a new conception that he referred to as "socialism", involving politics that recognised individuals as socially interdependent, and advocated social justice, cohesion, equal worth of each citizen, and equal opportunity.^[2] Critics of Blair denounced him for having the Labour Party abandon genuine socialism and accepting capitalism.^[3] Supporters, including the party's public opinion pollster Philip Gould, stated that after four consecutive General Election defeats, Labour had to demonstrate that it had made a decisive break from its left-wing past, in order to win again.^[4]

In May 1997, at 43 years old, Blair won a landslide General Election victory, the largest in Labour Party history, to become the youngest Prime Minister since Lord Liverpool in 1812. He attained early personal popularity, receiving a 93% public approval rating in September 1997, after the death of Diana, Princess of Wales.^{[5][6]} His first years of the New Labour government, Blair's government introduced the National Minimum Wage Act, Human Rights Act and Freedom of Information Act, and carried out devolution, establishing the Scottish Parliament, the National Assembly for Wales, and the Northern Ireland Assembly, fulfilling four of the promises in its 1997 manifesto.

In Northern Ireland, Blair was involved in the 1998 Good Friday Agreement. From the start of the War on Terror in 2001, he strongly supported much of the foreign policy of US President George W. Bush, and ensured that British armed forces participated in the 2001 invasion of Afghanistan and, more controversially, the 2003 invasion of Iraq. Blair is the Labour Party's longest-serving Prime Minister, the only person to have led the Labour Party to more than two consecutive general election victories, and the only Labour Prime Minister to serve consecutive terms more than one of which was at least four years long.

Blair was succeeded as Leader of the Labour Party on 24 June 2007 and as Prime Minister on 27 June 2007 by Gordon Brown.^[7] On the day he resigned as Prime Minister, he was appointed the official Envoy of the Quartet on the Middle East. In May 2008, Blair launched his Tony Blair Faith Foundation.^[8] This was followed in July 2009 by the launching of the Faith and Globalisation Initiative with Yale University in the US, Durham University in the UK and the National University of Singapore in Asia to deliver a postgraduate programme in partnership with the Foundation.^{[10][11]}

Contents [hide]

- Early life
- 1.1 Education
- 2 Early political career
- 3 Leader of the Opposition

The Right Honourable
Tony Blair

Prime Minister of the United Kingdom

In office
2 May 1997 – 27 June 2007

Monarch Elizabeth II

Deputy John Prescott

Succeeded by Gordon Brown

Leader of the Opposition

In office
21 July 1994 – 2 May 1997

Monarch Elizabeth II

Prime Minister John Major

Preceded by Margaret Beckett

Succeeded by John Major

Leader of the Labour Party

Induction of Influenza-Specific Mucosal Immunity by an Attenuated Recombinant Sendai Virus

Thuc-vy L. Le¹, Elena Mironova², Dominique Garcin², Richard W. Compans^{1*}

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Recent advances in molecular genetics have permitted the development of novel virus-based vectors for the delivery of genes and expression of gene products [6,7,8]. These live vectors have the advantage of promoting robust immune responses due to their ability to replicate, and induce expression of genes at high efficiency. Sendai virus is a member of the *Paramyxoviridae* family, belongs in the genus *respirovirus* and shares 60–80% sequence homology to human parainfluenza virus type 1 (HPIV-1) [9,10]. The viral genome consists of a negative sense, non-segmented RNA. Although Sendai virus was originally isolated from humans during an outbreak of pneumonitis [11] subsequent human exposures to Sendai virus have not resulted in observed pathology [12]. The virus is commonly isolated from mouse colonies and Sendai virus infection in mice leads to bronchopneumonia, causing severe pathology and inflammation in the respiratory tract. The sequence homology and similarities in respiratory pathology have made Sendai virus a mouse model for HPIV-1. Immunization with Sendai virus promotes an immune response in non-human primates that is protective against HPIV-1 [13,14] and clinical trials are underway to determine the efficacy of this virus for protection against HPIV-1 in humans [15]. Sendai virus naturally infects the respiratory tract of mice and recombinant viruses have been reported to efficiently transduce luciferase, lac Z and green fluorescent protein (GFP) genes in the airways of mice or ferrets as well as primary human nasal epithelial cells [16]. These data support the hypothesis that intranasal (i.n.) immunization with a recombinant Sendai virus will mediate heterologous gene expression in mucosal tissues and induce antibodies that are specific to a recombinant protein. A major advantage of a recombinant Sendai virus based vaccine is the observation that recurrence of parainfluenza virus infections is common in humans [12,17] suggesting that anti-vector responses are limited, making repeated administration of such a vaccine possible.

We have previously described the recovery of a mutant virus GP42-SeV containing a replacement of nucleotides 1–42 of the 3' leader sequence encoding the virus genomic promoter (P^L), with the corresponding sequence of the 5' trailer sequence encoding the anti-genomic promoter (P^R) [6]. This mutant exhibits enhanced chronic infection and reduced virus-induced programmed cell death *in vitro* [18]. In the present study, we introduced the hemagglutinin (HA) gene from influenza virus A/Puerto Rico/8/1934 (PR/8) into an intergenic sequence of GP42-SeV. This vector, designated GP42-H1, was evaluated for induction of systemic and mucosal antibodies as well as effectiveness of protection from lethal challenge with influenza virus.

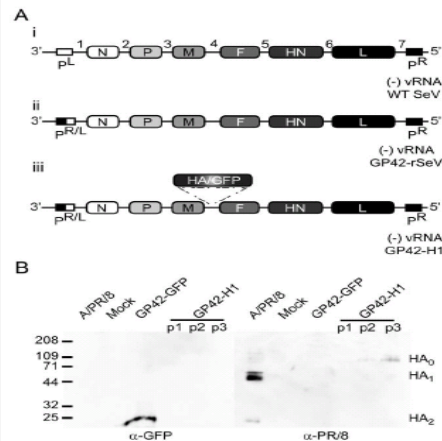


Figure 1. Generation of the GP42-H1 vector. A) Representation of wild-type Sendai virus gene construct (i) illustrating the major viral genes N, P, M, F, HN and L. The left promoter (P^L) and right promoter (P^R) function as the genomic promoter and anti-genomic promoter respectively. Seven gene boundaries that encode the conserved regulatory transcription start and transcription stop sequence are represented numerically. The mutant GP42-SeV (ii) genomic RNA is identical to WT Sendai virus with the exception of 3' P^L in which 42 nucleotides of the P^L were replaced with the corresponding sequence from P^R (P^R). Additional transcription start, stop, poly-adenylation sequences and a unique Mlu I restriction site were introduced into the intergenic region between the Sendai M and F genes. Using the unique Mlu I restriction site, the GFP or HA gene was inserted (respecting the rule of six) generating the recombinant Sendai GP42-GFP (19) or GP42-H1 vectors (iii). B) Recombinant GP42-H1 virus was cultured in BSR-T7 cells for three passages. Cell free supernatant containing virus suspensions were collected and used to infect CV-1 cells (refer to Materials and Methods). Proteins from GP42-GFP or GP42-H1 infected cell extracts were resolved on SDS-PAGE and screened for GFP (left) or HA (right) expression by western analysis. Mock infected cells and allantoic fluid from PR/8 infected eggs are also shown. doi:10.1371/journal.pone.0018780.g001

Plos ONE

DOI: 10.1371/journal.pone.0018780

Recent advances in molecular genetics have permitted the development of novel virus-based vectors for the delivery of genes and expression of gene products [6,7,8]. These live vectors have the advantage of promoting robust immune responses due to their ability to replicate, and induce expression of genes at high efficiency. **Sendai virus** is a member of the Paramyxoviridae family, belongs in the genus respirovirus and shares 60–80% sequence homology to **human parainfluenza virus type 1 (HPIV-1)** [9,10].

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Named entities + variants (**human parainfluenza virus type, HPIV-1**)

Speculation (**reported, suggesting**)

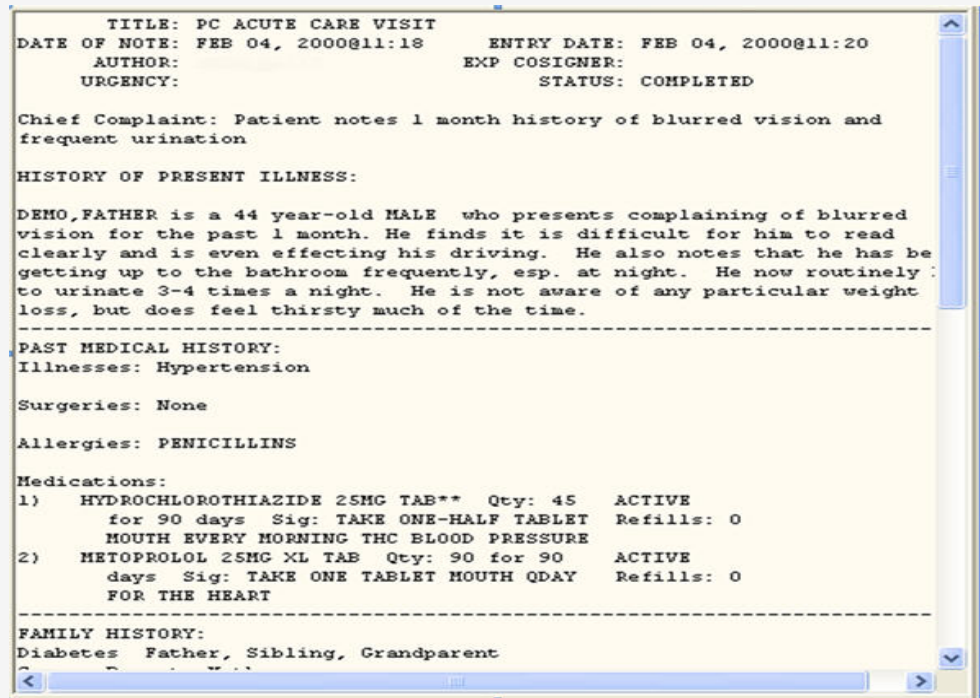
Species (**human**)

Cell types (**nasal epithelial cells**)

Facts

References

Medical Records



A screenshot of a medical record form. The form is titled 'PC ACUTE CARE VISIT' and contains fields for 'DATE OF NOTE', 'ENTRY DATE', 'AUTHOR', 'EXP COSIGNER', 'URGENCY', and 'STATUS'. The 'STATUS' is 'COMPLETED'. The 'Chief Complaint' is 'Patient notes 1 month history of blurred vision and frequent urination'. The 'HISTORY OF PRESENT ILLNESS' section describes a 44-year-old male with blurred vision and frequent urination. The 'PAST MEDICAL HISTORY' section lists 'Hypertension', 'Surgeries: None', and 'Allergies: PENICILLINS'. The 'Medications' section lists two medications: 'HYDROCHLOROTHIAZIDE 25MG TAB**' and 'METOPROLOL 25MG XL TAB'. The 'FAMILY HISTORY' section lists 'Diabetes Father, Sibling, Grandparent'.

TITLE: PC ACUTE CARE VISIT
DATE OF NOTE: FEB 04, 2000@11:18 ENTRY DATE: FEB 04, 2000@11:20
AUTHOR: EXP COSIGNER:
URGENCY: STATUS: COMPLETED

Chief Complaint: Patient notes 1 month history of blurred vision and frequent urination

HISTORY OF PRESENT ILLNESS:

DEMO, FATHER is a 44 year-old MALE who presents complaining of blurred vision for the past 1 month. He finds it is difficult for him to read clearly and is even effecting his driving. He also notes that he has been getting up to the bathroom frequently, esp. at night. He now routinely to urinate 3-4 times a night. He is not aware of any particular weight loss, but does feel thirsty much of the time.

PAST MEDICAL HISTORY:
Illnesses: Hypertension

Surgeries: None

Allergies: PENICILLINS

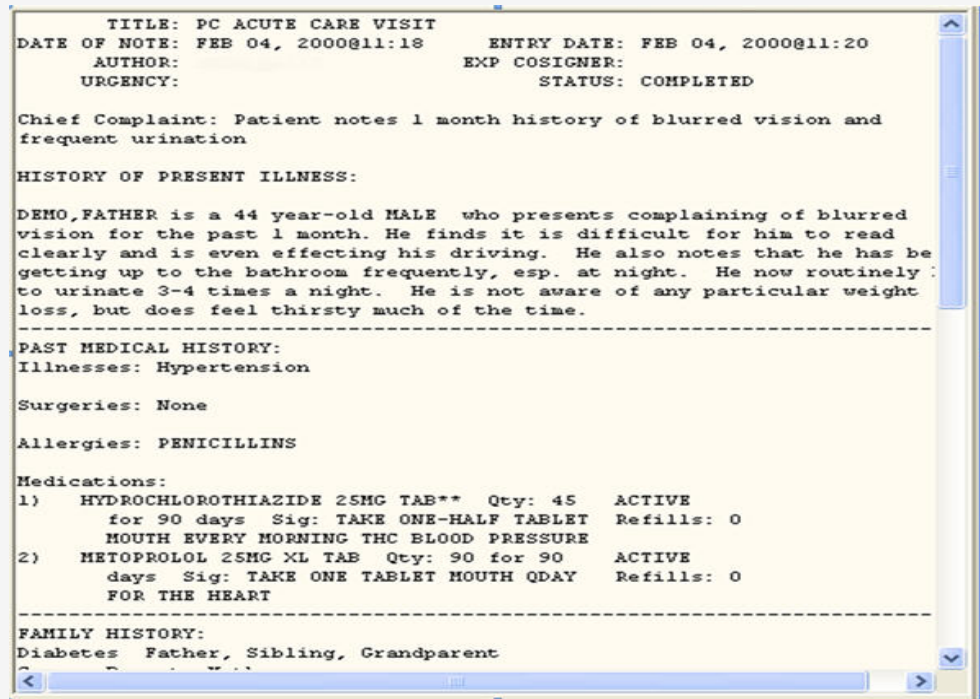
Medications:

1) HYDROCHLOROTHIAZIDE 25MG TAB** Qty: 45 ACTIVE
for 90 days Sig: TAKE ONE-HALF TABLET Refills: 0
MOUTH EVERY MORNING THC BLOOD PRESSURE

2) METOPROLOL 25MG XL TAB Qty: 90 for 90 ACTIVE
days Sig: TAKE ONE TABLET MOUTH QDAY Refills: 0
FOR THE HEART

FAMILY HISTORY:
Diabetes Father, Sibling, Grandparent

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FOR THE HEART

FAMILY HISTORY:
Diabetes Father, Sibling, Grandparent

Literary Texts

- Project Gutenberg (<http://www.gutenberg.org/browse/scores/top>)
- A team of horses passed from Finglas with toiling plodding tread, dragging through the funereal silence a creaking waggon on which lay a granite block. The waggoner marching at their head saluted.
 - Ulysses – <http://www.gutenberg.org/files/4300/4300-h/4300-h.htm>
- There was no possibility of taking a walk that day. We had been wandering, indeed, in the leafless shrubbery an hour in the morning; but since dinner (Mrs. Reed, when there was no company, dined early) the cold winter wind had brought with it clouds so sombre, and a rain so penetrating, that further out-door exercise was now out of the question.
 - Jane Eyre – <http://www.gutenberg.org/files/1260/1260-h/1260-h.htm>
- Dorothy lived in the midst of the great Kansas prairies, with Uncle Henry, who was a farmer, and Aunt Em, who was the farmer's wife. Their house was small, for the lumber to build it had to be carried by wagon many miles. There were four walls, a floor and a roof, which made one room; and this room contained a rusty looking cookstove, a cupboard for the dishes, a table, three or four chairs, and the beds. Uncle Henry and Aunt Em had a big bed in one corner, and Dorothy a little bed in another corner. There was no garret at all, and no cellar--except a small hole dug in the ground, called a cyclone cellar, where the family could go in case one of those great whirlwinds arose, mighty enough to crush any building in its path. It was reached by a trap door in the middle of the floor, from which a ladder led down into the small, dark hole.
 - The Wizard of Oz – <http://www.gutenberg.org/files/55/55-h/55-h.htm>

A Really Long Literary Sentence

- Try parsing this
 - “Bloat is one of the co-tenants of the place, a maisonette erected last century, not far from the Chelsea Embankment, by Corydon Throsp, an acquaintance of the Rossettis' who wore hair smocks and liked to cultivate pharmaceutical plants up on the roof (a tradition young Osbie Feel has lately revived), a few of them hardy enough to survive fogs and frosts, but most returning, as fragments of peculiar alkaloids, to rooftop earth, along with manure from a trio of prize Wessex Saddleback sows quartered there by Throsp's successor, and dead leaves off many decorative trees transplanted to the roof by later tenants, and the odd un stomachable meal thrown or vomited there by this or that sensitive epicurean—all got scumbled together, eventually, by the knives of the seasons, to an impasto, feet thick, of unbelievable black topsoil in which anything could grow, not the least being bananas.”
- Do you know the source?

Quiz Answer

- “Gravity’s Rainbow” (by Thomas Pynchon), known for its use of very arcane words and complicated sentence (and plot) structure.
- Another such work is “Finnegans Wake” by James Joyce.
- Poetry is even more difficult.

NLP