Developing computational skills for digital collections, Thursday, 5th of May, 2022



Timeline summarization for large-scale past-web events with Python: the case of Arquivo.pt Daniel Gomes and Ricardo Campos <u>daniel.gomes@fccn.pt</u>, <u>ricardo.campos@ipt.pt</u>





of the web pages disappear or change their content after only 1 year. What is Arquivo.pt?



Free online service to research the Past Web

Preserves **publicly accessible** information related with:

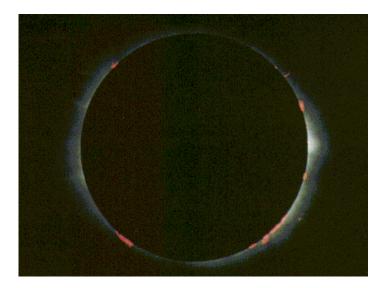
- Portugal
- **Research** and **Education** (international)

Preserves historical information published online **since the 1990s**

Arquivo.pt preserves national and international historical web content

GALIL	LEO Versão 2.0	
Janeiro 1993		
	Manual de utilização e sugestões de exploração	<i>AUTORES</i> Programação: João Veloso Manual: Elisa Prata Pina e M. Augusta Patrício Orientação: Carlos Fiolhais
ÍNDICE	Departamen	to de Física da Universidade de Coimbra
2. Cara 3. Conf	sentação sumária do programa cterísticas do equipamento Iguração mínima do computador eiros do programa	

(oldest page)



spacelink.nasa.gov – 1992 (oldest image)

Arquivo.pt is used word-wide



Country	Users % Users
1. 💽 Portugal	46,891 46.56%
2. 📟 United States	26,373 26.19%
3. 💽 Brazil	2,266 2.25%
4. 📩 Russia	2,234 2.22%
5. 풍 United Kingdom	2,231 2.22%
6. 🦲 Japan	2,172 2.16%
7. 💽 Canada	1,237 1.23%
8. 🔚 Mozambique	1,213 1.20%
9. 💶 India	902 0.90%
10. 🥅 Germany	894 0.89%

53% of users are international

User Interfaces and documentation also in English

Combined with Google Translate enables **cross-lingual access** to historical information from the Past Web

How to **search** and **access** the preserved information?



Search texts from the past in any language

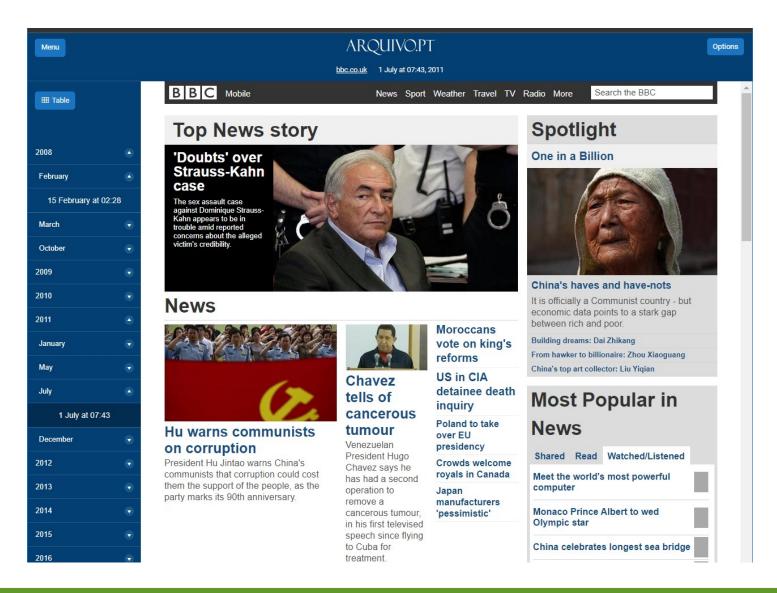
M	enu ARQUIVO.PT)	Options
	Q Ambasada RP	Search	n
	1996 1 Jan		2021 12Nov
	Pages Images Narrative	Advanced s	search
	→ berlin.msz.gov.pl/pl		
	Ambasada RP w Berlinie		
	30 March 2019		
	Ambasada RP w Berlinie Masz wyłączoną obsługę języka JavaScript Polski Deutsch RSS Wersja tekstowa Być wiernym Ojczyźnie Rzeczypospolitej Polskiej Aktualności Ambasada Współpraca dwustronna się zwrócić? Zasady realizacji projektów polonijnych Ambasada Ambasada Ambasada RP w		
	→ dublin.msz.gov.pl/pl		
	Ambasada RP w Dublinie		
	10 June 2017		
	Ambasada RP w Dublinie Masz wyłączoną obsługę języka JavaScript English Polski RSS Wersja tekstowa Polsce – służyć, Europę Świat rozumiać Aktuelności Ambasada Wanólarzeg dwystrenne – WYDZIAŁ EM KONSULARNYM – Ambasada – Ambasada PD w		

Świat – rozumieć Aktualności **Ambasada** Współpraca dwustronna ... WYDZIAŁEM KONSULARNYM **Ambasada Ambasada RP** w Dublinie 5 Ailesbury Road Ballsbridge D04 W221 Dublin ...

Search the **history** of a web address

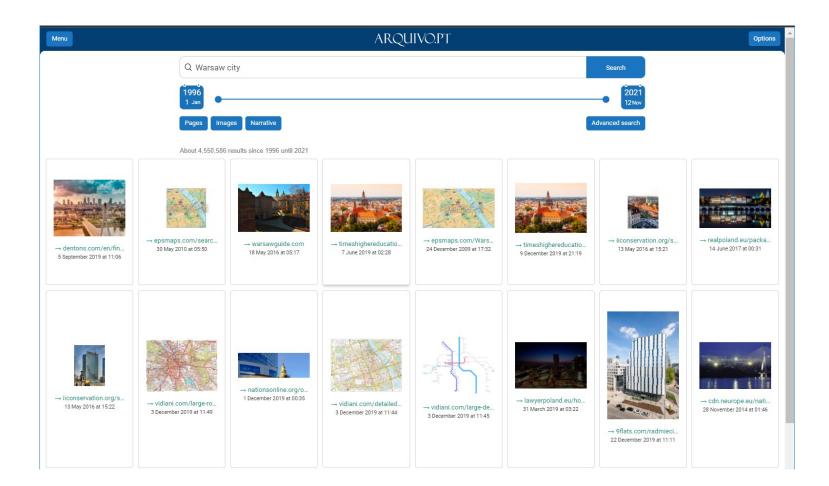
Menu	Menu ARQUIVO.PT												
Q bbc.co.uk											Search		
	1996 1. Jan											021 2Nov	
	1 Jan Pages Images Narrative										Advanced se		
	Cerca	a de 2.538 resu	ltados desde 19	96 a 2021									
•						^Ⅲ Table	≣ List						Þ
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
15 Feb	4 May	29 May	4 Jan	21 Jan	10 Jan	5 Sep	1 Jan	1 Jan	20 Jan	1 Jan	1 Jan	1 Jan	3 Jan
14 Mar	20 May	30 May	6 Jan	27 Jan	11 Jan	7 Sep	2 Jan	2 Jan	9 Feb	1 Jan	2 Jan	1 Jan	3 Jan
22 Oct	20 May	4 Aug	12 Jan	31 Jan	12 Jan	23 Sep	3 Jan	4 Jan	10 Feb	2 Jan	3 Jan	2 Jan	3 Jan
22 Oct	11 Jun		12 Jan	11 Mar	15 Jan	24 Sep	4 Jan	8 Jan	3 Apr	2 Jan	4 Jan	3 Jan	4 Jan
23 Oct	22 Jun		14 Jan	12 Mar	17 Jan	26 Sep	5 Jan	8 Jan	4 Apr	2 Jan	5 Jan	4 Jan	4 Jan
	6 Aug		21 Jan	13 Mar	18 Jan	27 Sep	6 Jan	17 Jan	5 Apr	3 Jan	6 Jan	5 Jan	4 Jan
	6 Aug		21 May	14 Mar	19 Jan	28 Sep	8 Jan	17 Jan	6 Apr	3 Jan	7 Jan	6 Jan	6 Jan
	3 Sep		1 Jul	15 Mar	22 Jan	30 Sep	10 Jan	21 Jan	7 Apr	3 Jan	8 Jan	7 Jan	6 Jan
	3 Sep		1 Dez	16 Mar	23 Jan	4 Oct	10 Jan	24 Jan	8 Apr	3 Jan	9 Jan	8 Jan	6 Jan
	4 Sep		2 Dez	17 Mar	26 Jan	5 Oct	12 Jan	28 Jan	9 Apr	3 Jan	10 Jan	9 Jan	6 Jan
	8 Sep			18 Mar	29 Jan	6 Oct	17 Jan	30 Jan	10 Apr	3 Jan	11 Jan	10 Jan	8 Jan

Browse <u>bbc.co.uk</u> 10 years ago





Search **images** from the past





S Visit

Title: Warsaw city centre

Alt text: Warsaw city centre

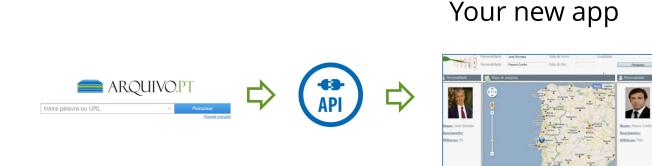
Caption: Poland's education system has seen some extraordinary changes in recent years. Following a huge drive in the nation's Katowice =6 1001+ Wrocław University of Science and Technology Wrocław Read mor... URL: timeshighereducation.com/sites/default/files/styles/the_breaking_news_image_style/public/warsaw_city_c entre.jpg?tick=NYFWCvNj Resolution: jpg 620 x 413 Capture date: 7 June 2019 at 02:28

Page

Title: Best universities in Poland | Times Higher Education (THE)

URL: timeshighereducation.com/student/best-universities/best-universities-poland Capture date: 7 June 2019 at 02:28

Application **P**rogramming Interfaces to develop new applications



Arquivo.pt APIs

APIs

Daniel Gomes edited this page 11 days ago · 33 revisions

APIs specific to Arquivo.pt that enable the full exploration of its functions

- Arquivo.pt API (Full-text & URL search)
- Image Search API v1.1 (beta version)

APIs based on international standards to enable interoperability among web archives and code reuse

- CDX-server API (URL search)
- Memento API (URL search)



APIs requests and responses are detailed on GitHub

Arquivo.pt API

Daniel Gomes edited this page on 17 Dec 2021 · 11 revisions

The Arquivo.pt API allows full-text search and access preserved web content and related metadata. It is also possible to search by URL, accessing all versions of preserved web content. API returns a **JSON** object.

EndPoint: https://arquivo.pt/textsearch

Note: a text search query returns a maximum of 2000 response results

Request Parameters

Search for terms

Parameter Name	Description	Examples
q	 Query search terms. The query can contain advanced search operators. Advanced search operators can be: " " : search for items containing expression composed by search terms (e.g. phrase or named entity). - : excludes items that contains the given terms. 	q=James Davis q="Antonio Costa" q=Albert -Einstein
from	Set an initial date for the time span of the search. Format: YYYYMMDDHHMMSS, also accepts a shorter date fotmat, e.g. (YYYY). Default: 1996	from=19960101000000
to	Set a end date for the time span of the search. Format: YYYYMMDDHHMMSS, also accepts a shorter date format, for example (YYYY). Default: Current Year-1	to=20151022163016

Response fields

Type of Search	Field Name	Description	Examples
Full-text, URL, Metadata	serviceName	Service Name.	"serviceName": "Arquivo.pt - the Portuguese web-archive"
Full-text, URL, Metadata	linkToService	URL for the service, in the case arquivo.pt	"linkToService": "https://arquivo.pt"
Full-text, URL, Metadata	request_parameters	field with all request parameters.	"request_parameters": { "q": "Albert Einstein", "offset": 10, "limit": 5, "itemsPerSite": 2, "prettyPrint": "true" }
Full-text, URL	next_page	URL for the next N items. N = offset + limit. (offset=0 and limit=50). Default=50	"next_page":"http://arquivo.pt/textsearch? q=hello%20world&offset=50"
Full-text, URL	previous_page	URL for previous N items. N = offset - limit. (offset=0 and limit=50). Default=0.	"previous_page":"http://arquivo.pt/text search?q=hello%20world&offset=0"

Usage examples

Examples Requests

Example Request - Full-text Search

Full-text Search for the terms Albert and Einstein, with a limit of 5 results, with the offset to 10. Finally, returns the results with formatting.

https://arquivo.pt/textsearch?q=Albert%20Einstein&maxItems=5&prettyPrint=true

Example Response - Full-text Search

```
"serviceName": "Arquivo.pt - the Portuguese web-archive",
"linkToService": "https://arquivo.pt",
"next page": "https://arquivo.pt/textsearch?g=Albert%20Einstein&maxItems=5&prettyPrint=true&offset=5",
"previous page": "https://arquivo.pt/textsearch?q=Albert%20Einstein&maxItems=5&prettyPrint=true&offset=0",
"request parameters": {
 "q": "Albert Einstein",
  "maxItems": "5",
  "prettyPrint": "true"
},
"response items": [
    "title": "Albert Einstein ? Wikipédia, a enciclopédia livre",
    "originalURL": "http://pt.wikipedia.org/wiki/Albert_Einstein",
    "linkToArchive": "https://arquivo.pt/wayback/20150408223215/http://pt.wikipedia.org/wiki/Albert Einstein",
    "tstamp": "20150408223215",
    "contentLength": "513829",
    "digest": "3bf5a50a6ec8adddc5225569d360123b",
    "mimeType": "text/html",
    "linkToScreenshot": "https://arquivo.pt/screenshot/?url=https%3A%2F%2Farquivo.pt%2FnoFrame%2Freplay%2F2015040822
    "date": "1428532335",
    "encoding": "UTF-8",
    "linkToNoFrame": "https://arquivo.pt/noFrame/replay/20150408223215/http://pt.wikipedia.org/wiki/Albert_Einstein"
    "linkToOriginalFile": "https://arquivo.pt/noFrame/replay/20150408223215id /http://pt.wikipedia.org/wiki/Albert E
    "snippet": "<em>Albert</em> <em>Einstein</em> &#8211; Wikip&eacute;dia, a enciclop&eacute;dia livre <em>Albert</
    "collection": "AWP17",
    "linkToExtractedText": "https://arquivo.pt/textextracted?m=http%3A%2F%2Fpt.wikipedia.org%2Fwiki%2FAlbert Einstei
    "linkToMetadata": "https://arquivo.pt/textsearch?metadata=http%3A%2F%2Fpt.wikipedia.org%2Fwiki%2FAlbert Einsteir
  },
```

Example Request - URL Search

URL Search for the expresso.pt versions, with a limit of 5 results. Finally, returns the results with formatting.

https://arquivo.pt/textsearch?prettyPrint=true&versionHistory=expresso.pt&maxItems=5

Example Response - URL Search

{

},

```
"serviceName": "Arquivo.pt - the Portuguese web-archive",
"linkToService": "https://arquivo.pt",
"next_page": "https://arquivo.pt/textsearch?prettyPrint=true&versionHistory=expresso.pt&maxItems=5&offset=5",
"previous page": "https://arquivo.pt/textsearch?prettyPrint=true&versionHistory=expresso.pt&maxItems=5&offset=0",
"request parameters": {
  "maxItems": "5",
  "from": "19960101000000",
  "to": "20181231235959",
  "prettyPrint": "true"
},
"response_items": [
   "title": "302 Found",
    "originalURL": "http://www.expresso.pt/",
   "linkToArchive": "https://arquivo.pt/wayback/20160719170305/http://www.expresso.pt/",
    "tstamp": "20160719170305",
    "contentLength": "318",
    "digest": "POPLDWWERZ2PUX2BRPCFNS2BB6ELQHMY",
    "mimeType": "text/html",
    "linkToScreenshot": "https://arquivo.pt/screenshot/?url=https%3A%2F%2Farquivo.pt%2FnoFrame%2Freplay%2F2016071
    "date": "1468947785",
    "encoding": "iso-8859-1",
    "linkToNoFrame": "https://arquivo.pt/noFrame/replay/20160719170305/http://www.expresso.pt/",
    "linkToOriginalFile": "https://arquivo.pt/noFrame/replay/20160719170305id_/http://www.expresso.pt/",
    "status": "302",
    "collection": "FAWP2620160719",
    "linkToExtractedText": "https://arquivo.pt/textextracted?m=http%3A%2F%2Fwww.expresso.pt%2F%2F20160719170305"
    "linkToMetadata": "https://arquivo.pt/textsearch?metadata=http%3A%2F%2Fwww.expresso.pt%2F%2F20160719170305"
```

API clients can be written in any programming language

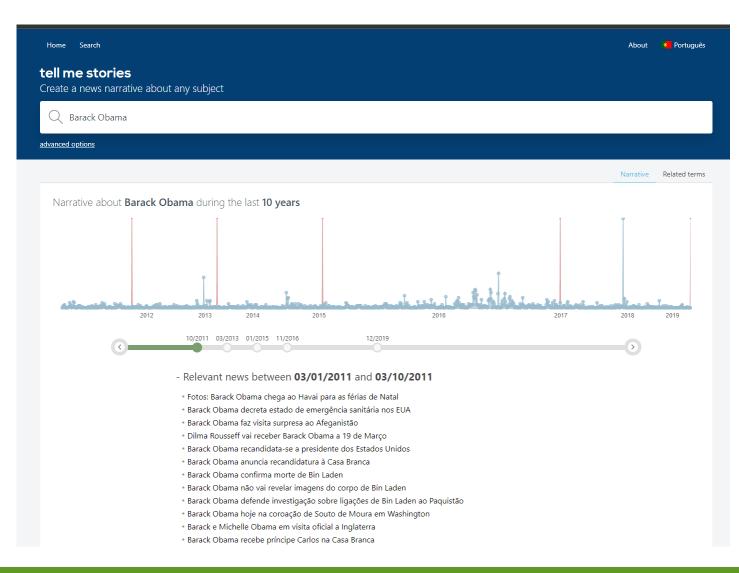
r master - ₽1 branch ⊙0	I tags	Go to file Add file - Code -	About
his branch is 1 commit ahead, 1 com	mit behind jnobre/client-java-apiznaster.	11 Contribute - 🗘 Fetch upstream -	No description, website, or topics provided.
jnobre Update README.md		e7fad33 on 11 Nov 2019 320 commits	☆ 1 star ⊙ 1 watching
libs	First commit	5 years ago	♀ 1 fork
src	Update README	4 years ago	Releases
gitignore	First commit	5 years ago	No releases published
README.md	Update README.md	3 years ago	Create a new release
README.md		D	Packages
TextSearch API Requirements	Client		No packages published Publish your first package Languages
Requirements	se another, you must adapt the following instruction	ons)	Publish your first package
Requirements Eclipse as IDE (if you want to u OR use javac Instructions for imp	se another, you must adapt the following instruction		Publish your first package
Requirements Eclipse as IDE (if you want to u OR use javac Instructions for imp 1. In Eclipse (or the IDE to ch	se another, you must adapt the following instruction orting the library	roject);	Publish your first package
Requirements Eclipse as IDE (if you want to u OR use javac Instructions for imp 1. In Eclipse (or the IDE to ch 2. With the project created, y api.	se another, you must adapt the following instruction orting the library noose), create a new project (File -> New -> Java Pr	roject); by the existing folders in client-java-	Publish your first package
Requirements Eclipse as IDE (if you want to u OR use javac Instructions for imp 1. In Eclipse (or the IDE to cf 2. With the project created, y api. 3. NOTE: If you encounter m	se another, you must adapt the following instruction orting the library noose), create a new project (File -> New -> Java Pr noose), create a new project (File -> New -> Java Pr	roject); by the existing folders in client-java-	Publish your first package
Requirements Eclipse as IDE (if you want to u OR use javac Instructions for imp 1. In Eclipse (or the IDE to cf 2. With the project created, y api. 3. NOTE: If you encounter m Build Path of the project. Use	se another, you must adapt the following instruction orting the library noose), create a new project (File -> New -> Java Pr noose), create a new project (File -> New -> Java Pr	roject); by the existing folders in client-java- Libraries in the libs folder are in the	Publish your first package

Example of Java client at <u>github.com/arquivo</u>

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	title	slug	collection	layout	auth	ors	
	Sumarização de narrativas acerca de eventos do passado documentados na web utilizando Python: o caso do Arquivo.pt	sumarizacao- narrativas-web- python	lessons	lesson	Ricardo Campos	Daniel Gomes	
Í	ndice						
	6 include toc.html %)						
ar fo pu pr qu vc au	longo dos séculos a comunicação evoluiu paraleli nalógicos é hoje digital e tem presença online. A "cu nete de informaçõe publicadas são preservadas. Neste procu ublicadas a los preservadas. Neste procu ublicadas contine desde a decada de 1990. Apesar di roblema de explorar de forma eficiente o patrimôni autidades de dados históricos arquivados ao longo alume de dados. As timelines (sistemas automáticos utomática de resumos de eventos ao longo do tem as noticias.	ulpa" é da web, que desc sta mudança de paradig esso, os arquivos da web os avanços recentes na p o histórico preservado p o do tempo, e à inexistên s de sumarização tempo	de o final dos a ma obrigou a o assumem esp preservação de por estes arquin ncia de ferram ral) surgem ne	anos 90 do uma alteraç ecial releva informaçõ vos perman entas que p ste context	século passado, se tor ção profunda na forma incia, ao preservarem es arquivadas a partir ece por resolver devic possam processar auto o, como a solução ide	rnou na principal a como as as informações da web, o do às enormes omaticamente esse eal para a produção	
ev re na	este tutorial, pretendemos mostrar como explorar o ventos do passado a partir de conteúdos históricos elevantes ao combinar o uso da API do Arquivo, pt ca rartávas temporais sobre qualquer tema objeto de tilizadores poderão usar para interagir com ambas a	arquivados da web. Mai om a utilização do Cont notícia. Para a concretiza	s concretamen a-me Histórias	ite, demons , um sistem	traremos como obter a que permite criar au	resultados utomaticamente	

Example of Python client at <u>github.com/programminghistorian</u>

Arquivo.pt API in action: Timeline summarization for large-scale past-web events



TellMeStories (ContaMeHistorias.pt)

Automatically generates narratives about any subject based on online news from the Past.

ContaMeHistorias.pt won the Arquivo.pt **Annual** Awards in 2018

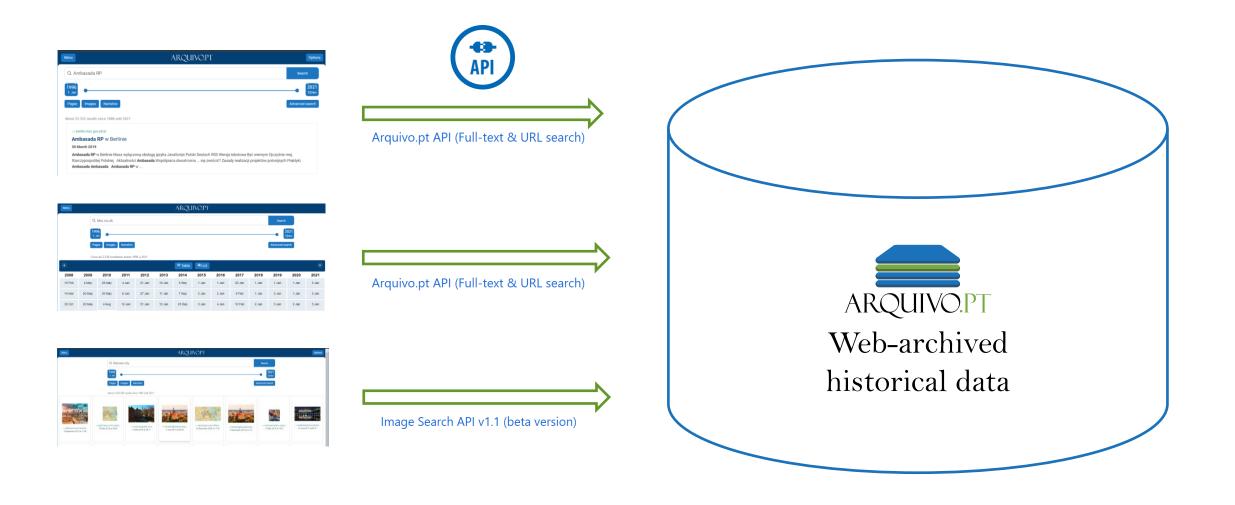




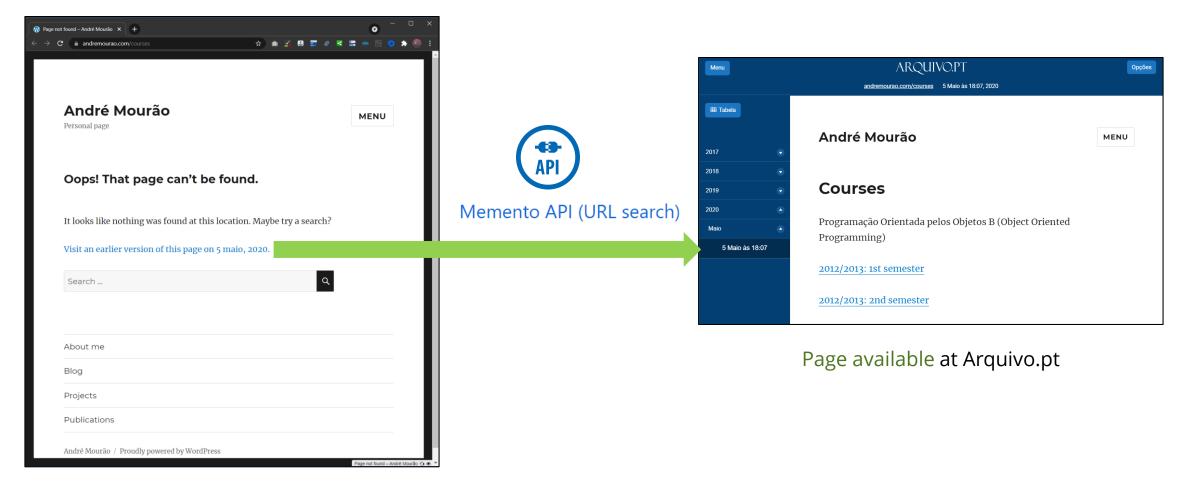
Support of the President of the Republic of Portugal



Arquivo.pt APIs: "we eat our own dog food!"



arquivo.pt/arquivo404 fix the broken links in your website!



Page not found at live website

Training about web archiving

Attend Training courses about web preservation and research

New ways of searching the past (module A)

– Any Internet user

Publish preservable information on the web (B)

– Web authors

Automatic processing of information preserved from the Web (C)

– Developers, Researchers

Do-it-yourself web archiving (D)

– Researchers, Librarians, Archivists

Videos in English also available!



arquivo.pt/training

Read this book 🙂

Daniel Gomes · Elena Demidova Jane Winters · Thomas Risse *Editors*

The Past Past Web Exploring Web Archives

🖄 Springer

Preprint version available in open access at: <u>arquivo.pt/book</u>

Web Archives as Infrastructures to Develop Innovative Services

Front Matter Pages 215-216

PDF 🛓

The Need for Research Infrastructures for the Study of Web Archives Niels Brügger Pages 217-224

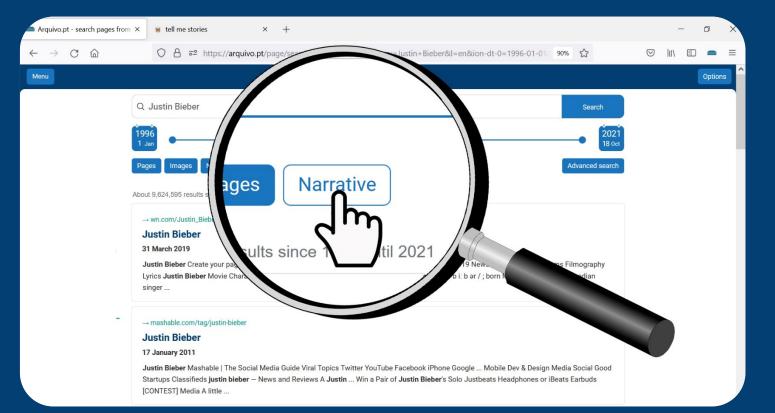
Automatic Generation of Timelines for Past-Web Events

Ricardo Campos, Arian Pasquali, Adam Jatowt, Vítor Mangaravite, Alípio Mário Jorge Pages 225-242

Tell me Stories

Arquivo.pt Awards 2018

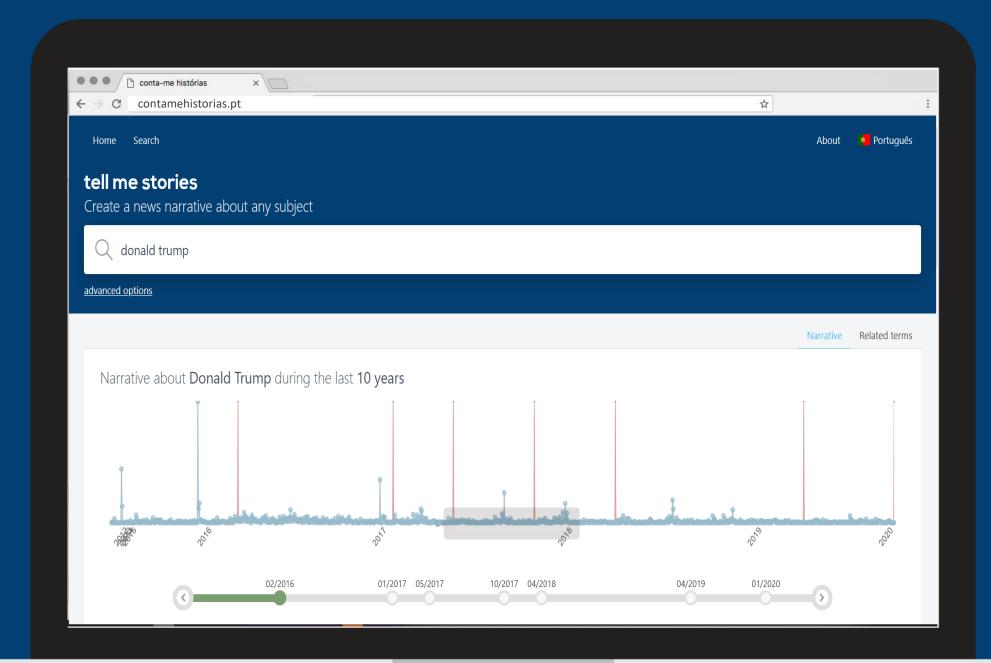




http://contamehistorias.pt



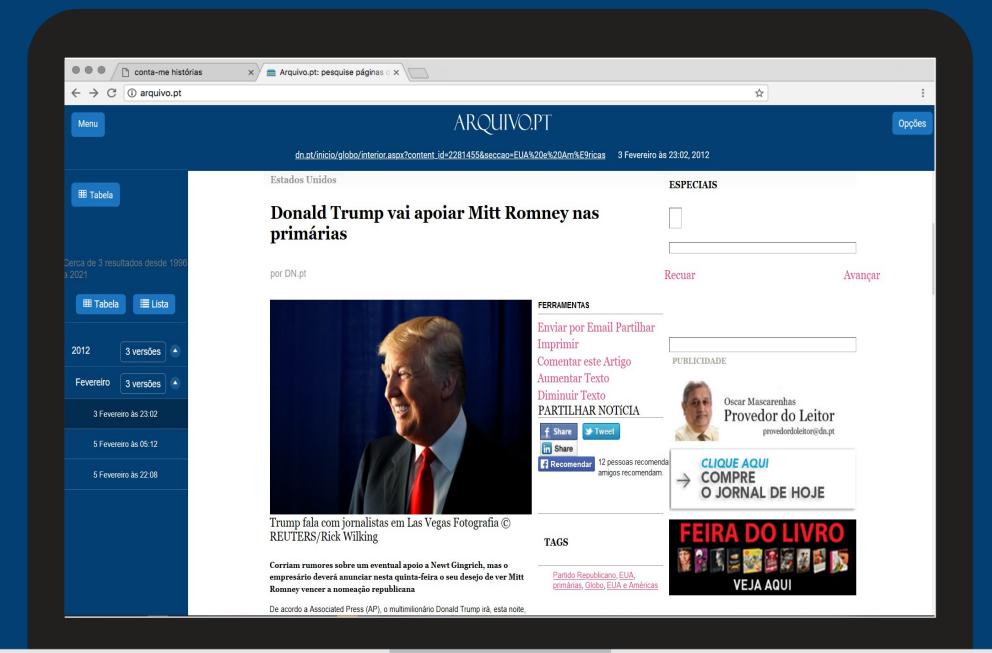
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tell me stories Create a news narrative about any subject								
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\leftrightarrow \Rightarrow C contamehistorias.pt		☆	:
-	Relevant news between 06/01/2011 and 23/02/2016		
	 Donald Trump inaugura o Hotel Trump SoHo New York rodeado pelos filhos 		
2012-02-03	 Donald Trump vai apoiar Mitt Romney nas primárias 		
	 Donald Trump é o 12º candidato republicano à Presidência dos EUA 		
	 Donald Trump anuncia candidatura à presidência dos EUA 		
	 Donald Trump é o novo candidato na corrida presidencial í Casa Branca 		
	 Donald Trump é candidato à presidência dos Estados Unidos 		
	 Donald Trump e Jeb Bush anunciam candidaturas à Casa Branca 		
	 Costa Rica e México sem 'Miss Universo' por causa de Donald Trump 		
	 Donald trump diz que john mccain não pode ser considerado herói de guerra 		
	 Donald Trump é o candidato favorito dos republicanos à Casa Branca 		
	 Campanha de donald trump para presidenciais nos eua sofre primeira baixa 		
	 Donald Trump diz que rival republicano Jeb Bush deve falar inglês em vez de espanhol 		
	 Ivanka Trump, a filha de Donald Trump quer deixar a sua marca 		
	 Donald Trump quer proibir a entrada de muçulmanos nos Estados Unidos 		
	 Donald Trump quer barrar "completamente" a entrada de muçulmanos nos Estados Unidos 		
	 Donald Trump quer proibir entrada de muçulmanos nos EUA 		
	 Obama graceja sobre possível discurso do Estado da União de Donald Trump 		
	 Ted Cruz vence Donald Trump no caucus do Iowa 		
	 Donald Trump e Bernie Sanders favoritos nas primárias de New Hampshire 		
	 Hillary Clinton e Donald Trump vencem, Jeb Bush sai de cena 		
		Horizontal	Vertical
News sources : Lux Iol, Tvi24 Iol, Dn, Google, Cmjornal, Sicnoticias Sapo, Abola:	Abola, Jn, Ionline, Sol Sapo, Tsf, Noticias Sapo, Publico, Expresso Sapo, Sapo, Economico Sapo, Sabado, Jornaldenegocios, 80, Sol Sapo:80,	Aeiou, Dinheirovivo, Rtp, Dn	ioticias, News

10925 PAGES FOUND **3222** CONSIDERED NEWS ARTICLES





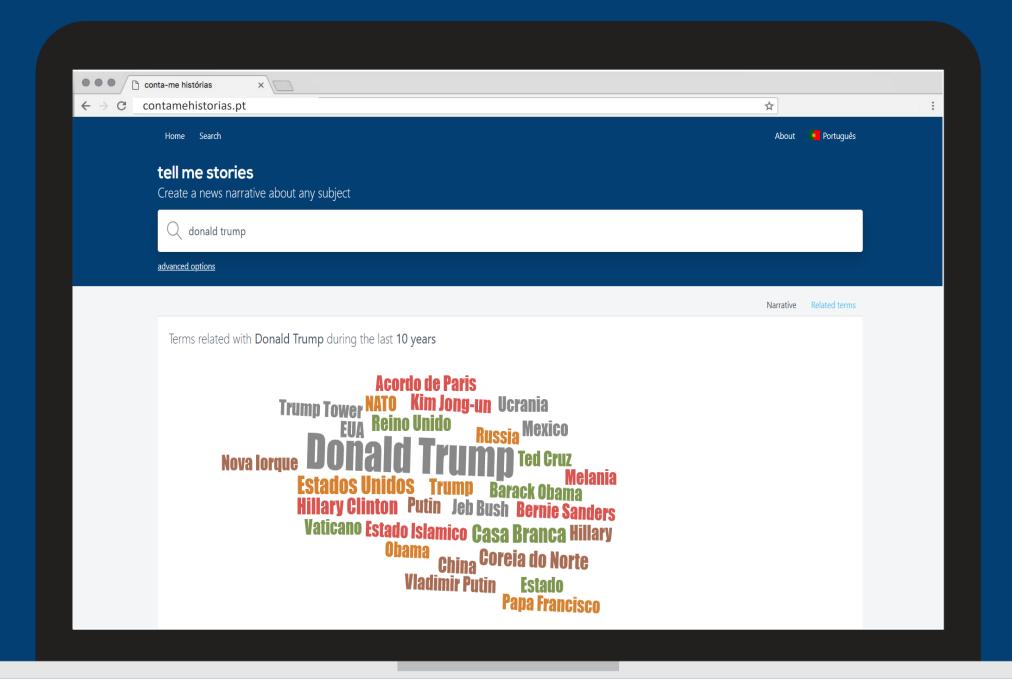
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$\leftarrow \rightarrow \mathbf{C}$ contamehistorias.pt	*		1
	- Relevant news between 19/01/2017 and 07/05/2017		
	 Donald Trump torna-se o 45.º Presidente dos Estados Unidos 		
	 Theresa May quer discutir comércio e NATO com Donald Trump 		
	 Rússia discorda de Donald Trump e diz que Irão não é um Estado terrorista 		
	 Madonna, Scarlett Johanson e Michael Moore unidos contra Trump 		
	Parlamento unido na crítica a Donald Trump e em defesa do Acordo de Paris sobre clima		
	 Viola Davis defende Meryl Streep de Donald Trump 		
	 Britânicos protestam contra visita de Donald Trump ao Reino Unido 		
	 Donald Trump quer que Putin devolva Crimeia à Ucrânia 		
	• Donald Trump volta a defender supremacia nuclear dos EUA e diz que quer expandir arsenal		
	 Hillary Clinton goza com Donald Trump 		
	 Donald Trump vai faltar ao jantar de correspondentes da Casa Branca 		
	 Putin ridiculariza acusações de espionagem russa sobre Donald Trump 		
	 Secretário da Segurança Interna dos EUA desmente Donald Trump 		
	 Donald Trump quer assinar nova ordem sobre imigração 		
	 Donald Trump acusa Barack Obama de o ter colocado sob escuta durante a campanha 		
	 Presidente Peña Nieto cancela encontro com Donald Trump 		
	 Donald Trump recebe Angela Merkel na Casa Branca 		
	 Donald Trump afasta Steve Bannon do Conselho de Segurança Nacional 		
	 Donald Trump ameaça Coreia do Norte 		
	 Papa Francisco vai receber Donald Trump no Vaticano 		
		Horizontal	Vertical

News sources: Lux IoI, Tvi24 IoI, Dn, Abola, Jn, Ionline, Sol Sapo, Tsf, Noticias Sapo, Publico, Expresso Sapo, Sapo, Economico Sapo, Sabado, Jornaldenegocios, Aeiou, Dinheirovivo, Rtp, Dnoticias, News Google, Cmjornal, Sicnoticias Sapo, Abola:80, Sol Sapo:80,

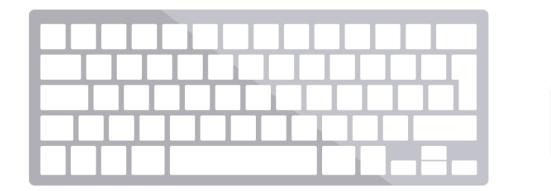
 10925
 3222

 PAGES FOUND
 CONSIDERED NEWS ARTICLES

24 NEWS SOURCES



http://yake.inesctec.pt



Time spent to run YAKE algorithm 0.47 ms.

Annotated text

The top 20 keywords in terms of relevance are annotated in the text.

brain aging gene discovered. Summary: Researchers have identified a genetic variant that can accelerate normal brain aging in older people by up to 12 years. Source: columbia university medical center. Genetic variant accelerates normal brain aging in older people by up to 12 years. columbia university medical center (CUMC) researchers have discovered a common genetic variant that greatly impacts normal brain aging, starting at around age 65, and may modify the risk for neurodegenerative diseases. The findings could point toward a novel biomarker for the evaluation of anti-aging interventions and highlight potential new targets for the prevention or treatment of age-associated brain disorders such as Alzheimer's disease. The study was published online today in the journal Cell Systems. "If you look at a group of seniors, some will look older than their peers and some will look younger," said the study's co-leader Asa Abeliovich, PhD, professor of pathology and neurology in the Taub Institute for Alzheimer's disease and the aging brain at CUMC. "The same differences in aging can be seen in the frontal cortex, the brain region responsible for higher mental processes. Our findings show that many of these differences are tied to variants of a gene called TMEM106B. People who have two 'bad' copies of this gene have a frontal cortex that, by various biological measures, appears 12 years older that those who have two normal copies." Studies have identified individual genes that increase one's risk for various neurodegenerative disorders, such as apolipoprotein E (APOE) for Alzheimer's disease. "But those genes explain only a small part of these diseases," said study co-leader Herve Rhinn, PhD, assistant professor of pathology and cell biology in the Taub Institute, "By far, the major risk factor for neurodegenerative disease is aging. Something changes in the brain as you age that makes you more susceptible to brain disease. That got us thinking, 'What, on a genetic level, is driving healthy brain aging?" In the current study, Drs. Abeliovich and Rhinn analyzed genetic data from autopsied human brain samples taken from 1,904 people without neurodegenerative disease. First, the researchers looked at the subjects' transcriptomes (the initial products of gene expression), compiling an average picture of the brain biology of people at a given age. Next, each person's transcriptome was compared to the average transcriptome of people at the same age, looking specifically at about 100 genes whose expression was found to increase or decrease with aging. From this comparison, the researchers derived a measure that they call differential aging : the difference between an individual's apparent (biological) age and his or her true (chronological) age. "This told us whether an individual's frontal cortex looked older or younger than expected," said Dr. Abeliovich. The researchers then searched the genome of each individual, looking for genetic variants that were associated with an increase in differential age. "One variant stood out: TMEM106B," said Dr. Rhinn. "It's very common. About one-third of people have two copies and another third have one copy." "TMEM106B begins to exert its effect once people reach age 65," said Dr. Abeliovich. "Until then, everybody's in the same boat, and then there's some yet-to-bedefined stress that kicks in. If you have two good copies of the gene, you respond well to that stress. If you have two bad copies, your brain ages quickly." The researchers found a second variant-inside the progranulin gene-that contributes to brain aging, though less so than TMEM106B. Progranulin and TMEM106B are located on different chromosomes but are involved in the same signaling pathway. Both have also been associated with a rare neurodegenerative disease called frontotemporal dementia. The study did not address what role the two genetic variants might have in neurodegenerative disease. "We were studying healthy individuals, so it is not about disease, per se," said Dr. Abeliovich. "But of course, it's in healthy tissue that you start to get disease. It appears that if you have these genetic variants, brain aging accelerates and that increases vulnerability to brain disease. And vice versa: if you have brain disease, the disease accelerates brain aging. It's a vicious cycle." About this genetics and aging research article Funding: The study was supported by grants from the National Institute of aging (AG042317), the National Institute of Neurological Disorders and Stroke, and the Michael J. Fox Foundation for Parkinson's Research. Dr. Abeliovich is a co-founder of and consultant for Alector. Dr. Rhinn is a consultant for Alector. The researchers declare no other financial conflicts of interest. Source: Karin Eskenazi – columbia university medical center Image Source:



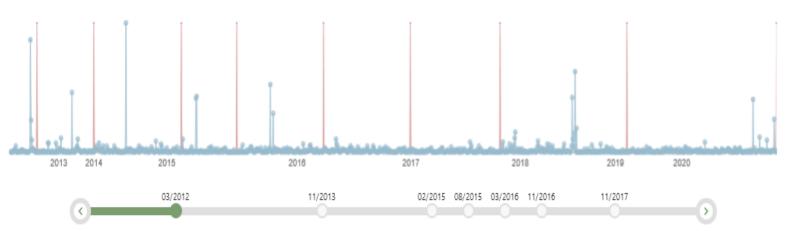


- Notícias relevantes entre 01, março 2015 e 22, novembro 2018

Identificados anticorpos contra coronavírus da Síndrome Respiratória do Médio Oriente. EUA confirmam primeiro caso de contaminação por MERS. Confirmado terceiro caso de coronavírus nos EUA. Cientistas anunciam composto que combate coronavírus como o da MERS. DGS renova recomendações sobre coronavírus do Médio Oriente. Sobe para cinco número de mortes devido ao coronavírus na coreia do sul. Coreia do sul regista sexta vítima mortal devido ao coronavírus mers. Coronavírus mers causa sétima vítima mortal na coreia do sul. Hong kong emite alerta vermelho para viagens à coreia do sul devido a surto de coronavírus. Coronavírus mers já matou nove pessoas na coreia do sul. Oms convoca reunião de comissão de emergência sobre síndrome respiratória. Oms discute na terça-feira situação do coronavírus mers na coreia do sul. Oms aconselha coreia do sul a proibir viagens de potenciais infetados com coronavírus mers. Equipa da OMS vai visitar Coreia do Sul para analisar surto de MERS. Presidente da Coreia do Sul cancela visita aos EUA devido ao surto do novo coronavírus. Coreia do sul regista mais sete casos de coronavírus mers. Síndrome respiratória do Médio Oriente é a nova preocupação da OMS. Medo da síndrome respiratória do médio oriente faz disparar compras online. Síndrome Respiratória propaga-se na Coreia do Sul. China e EUA anunciam testes bem sucedidos na luta contra a Síndrome Respiratória do Médio Oriente. OMS recusa declarar emergência sanitária mundial devido ao vírus MERS. Coreia do sul regista três novos casos de síndrome respiratória do médio oriente. Turismo da coreia do sul afetado por síndrome respiratória do médio oriente. homem morre com síndrome do Médio Oriente.



Narrativa sobre Putin durante os últimos 10 anos



- Notícias relevantes entre 03/01/2012 e 24/03/2012

- Mikhail Gorbatchov aconselha Vladimir Putin a abandonar a corrida à Presidência russa
- Tensão entre Putin e Medvedev face à intervenção na Líbia
- Partido de Vladimir Putin vence eleições parlamentares
- Marcha da oposição autorizada em Moscovo, Putin responde com manifestação
- Serviços secretos impediram atentado contra Putin
- Putin evoca vitória militar sobre Napoleão para apelar a 130 mil apoiantes
- · Putin confirma Medvedev no cargo de primeiro-ministro e promete diálogo com oposição
- Putin deverá ser escolhido para liderar Rússia nos próximos seis anos
- Putin volta a ser Presidente
- · Putin vence eleições presidenciais russas: Primeiro-ministro ganhou acto eleitoral com mais d
- · Czar Vladimir Putin regressa ao Kremlin para terceiro mandato
- Vladimir Putin vence presidenciais à primeira volta
- Vladimir Putin como Mr. Burns dos Simpsons [com vídeo]
- Dezenas de milhares de manifestantes contra Putin em Moscovo e São Petersburgo
- Vladimir Putin participa em encontro de motards na Ucrânia
- Vídeo: Putin vence eleições presidenciais russas
- * Medvedev apoia candidatura de Putin a presidente
- Super Putin, novo herói de Banda Desenhada
- Eduardo dos Santos saúda eleição de Vladimir Putin
- Vídeo: 20 mil em manifestação contra Putin

Tell me Stories Python Package

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http://github.com/LIAAD/TemporalSummarizationFramework





7.5.2 Percorrer os resultados obtidos do Arquivo.pt

O objeto search_result devolve o número total de resultados obtidos a partir da chamada à API do Arquivo.pt. O número total de resultados excede facilmente as 10,000 entradas. Um tal volume de dados é praticamente impossível de processar por qualquer utilizador que a partir dele queira retirar conhecimento em tempo útil.

In [3]: len(search_result)

Out[3]: 10834

Para lá do número total de resultados o objeto search_result reúne informação extremamente útil para o passo seguinte do algoritmo, i.e., a seleção das notícias mais relevantes ao longo do tempo. Em concreto, este objeto permite ter acesso à:

datatime : data de coleta do recurso;

Team



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