Life span of prime ministers of Australia*

Data analysis of life span of prime ministers of Australia until 2024-2-6

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1 Table and Graph

Table 1: Prime Ministers Death (until 2024-2-6)

Table 1: Life span of Prime ministers of Australia

Name	Born	Date	Died	Date	Age of	Death
Edmund Bart	ton	18	49	195	20	71
Alfred Deakin		18	56	193	19	63
Chris Watso	n	18	67	19^{2}	41	74
George Rei	d	18	45	193	18	73
Andrew Fish	er	180	62	193	28	66
Joseph Coo	k	180	60	19^{2}	47	87
Billy Hughe	es	180	62	19	52	90
Stanley Bru	ce	18	83	190	67	84
James Scull	in	18	76	19	53	77
Joseph Lyon	ıs	18	79	193	39	60
Earle Page	;	18	80	190	61	81
Robert Menz	ies	189	94	19'	78	84
Arthur Fadd	en	189	94	19'	73	79
John Curtin	n	18	85	19^{2}	45	60
Frank Ford	e	189	90	198	83	93
Ben Chifley	y	18	85	19	51	66
Harold Holt		19	08	190	67	59
John McEwen		19	00	198	80	80
John Gorton		19	11	200	02	91

^{*}Code and data are available at: https://github.com/zero616/Homeless_Death_Analysis.

Name	Born Date	Died Date	Age of Death
William McMa	ahon 19	008 19	988 80
Gough Whitl	am 19	20)14 98
Malcolm Fra	ser 19	30 20)15 85
Bob Hawke	e 19	20)19 90
Paul Keatin	ng 19)44 N	IA NA
John Howai	rd 19)39 N	IA NA
Kevin Rude	d 19)57 N	IA NA
Julia Gillar	d 19	061 N	IA NA
Tony Abbot	tt 19)57 N	IA NA
Malcolm Turn	bull 19	054 N	IA NA
Scott Morris	on 19	068 N	IA NA
Anthony Alba	nese 19	063 N	IA NA

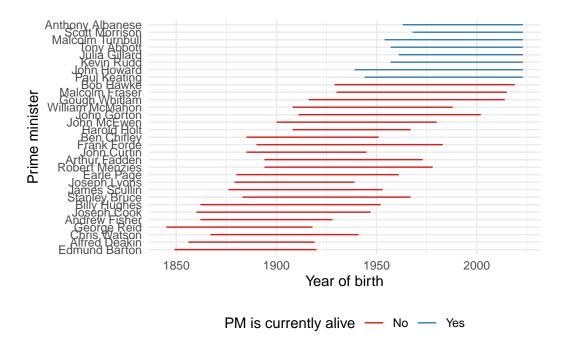


Figure 1: Death analysis by year

2 Findings

2.1 From table

Table ?? above provides a complete list of the life spans of Australian Prime Ministers, including their names, dates of birth and deaths. By analyzing this data, we can look at the life span of Australian politicians over the years.

2.2 Data sources and collection process

The data comes from the Wikipedia page titled "List of prime ministers of Australia". The web scraping process involves extracting information from the HTML structure of the page, specifically targeting the relevant tables containing the Prime Minister's details. The source data table contains very detailed information such as name, term, party affiliation, constituency, etc. However, in order to study the life span of Australian prime ministers, I deleted all data except name-year of birth and death. After some sorting, I summarized four types of data including the Prime Minister's name, year of birth and death, and age at death.

2.3 Challenge and Enjoyment

One challenge encountered along the way was using regular expressions to get the Prime Minister's name and birthday. I had to start working on the basics of regular expressions. I also had difficulties trying to distinguish living prime ministers and had to spend a lot of time solving them.

Despite the challenges, the process became fun as I dug deeper into exploring and visualizing the data. After looking at the images of each prime minister's life span, I discovered some deeper research themes from the images that could be analyzed. For example, the distribution pattern of prime life span, factors that may affect life span, etc. This discovery fueled my curiosity about the stories behind the data.

2.4 Reflection and future improvements

Some improvements I might make in future similar projects include more flexible data cleaning methods and more complex regular expressions to handle different formats of information. In addition, I will also consider introducing some automated tools to help identify and deal with potential data quality issues and improve the efficiency of the entire process.

References

- 2023. Wikipedia. Wikimedia Foundation. https://en.wikipedia.org/wiki/List_of_prime_min isters of Australia.
- Allaire, JJ, Yihui Xie, Christophe Dervieux, Jonathan McPherson, Javier Luraschi, Kevin Ushey, Aron Atkins, et al. 2023. *Rmarkdown: Dynamic Documents for r.* https://github.com/rstudio/rmarkdown.
- Firke, Sam. 2023. Janitor: Simple Tools for Examining and Cleaning Dirty Data. https://github.com/sfirke/janitor.
- R Core Team. 2023. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.
- Wickham, Hadley. 2022. Rvest: Easily Harvest (Scrape) Web Pages. https://rvest.tidyverse.org/.
- ——. 2023a. Stringr: Simple, Consistent Wrappers for Common String Operations. https://stringr.tidyverse.org.
- ———. 2023b. Tidyverse: Easily Install and Load the Tidyverse. https://tidyverse.tidyverse.org.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.
- Wickham, Hadley, Romain François, Lionel Henry, Kirill Müller, and Davis Vaughan. 2023. Dplyr: A Grammar of Data Manipulation. https://dplyr.tidyverse.org.
- Xie, Yihui, J. J. Allaire, and Garrett Grolemund. 2018. R Markdown: The Definitive Guide. Boca Raton, Florida: Chapman; Hall/CRC. https://bookdown.org/yihui/rmarkdown.
- Xie, Yihui, Christophe Dervieux, and Emily Riederer. 2020. R Markdown Cookbook. Boca Raton, Florida: Chapman; Hall/CRC. https://bookdown.org/yihui/rmarkdown-cookbook.