

CTSI-IT Pre-Interview Assessment

A Problem with Presidents

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Abstract

Using the ‘problem with presidents’ dataset, I identified years lived, months lived, and days lived by past and present presidents. Of all six living presidents, Jimmy Carter is the oldest at 97 years followed by current president Joe Biden at 79 and a half years old. John F. Kennedy was the shortest-lived president at 45 and a half years. The mean lived days from the set is 26394 days as of today (approximately 72 years).

1 Introduction

This report is an exploratory data analysis using the “problem with president” data which contains information birth and death dates as well as location of all US presidents. I used python for the analysis on the dataset.

2 Approach

I formatted the Birth and Death Dates to datetime. There are still living presidents so, I imputed their death dates with today's date. Using the datetime module I created *year_of_birth*, *lived_days*, *lived_years*, *lived_months* variables.

3 Results

From Table1 below, Jimmy Carter is the longest live president at 97 years 7 months. John F. Kennedy was the shortest-lived president. He was assassinated at age 46 and a half years as shown in table 2 below.

Table 1: Top 10 Longest-lived President

PRESIDENT	BIRTH_DATE	BIRTH PLACE	DEATH_DATE	LOCATION OF DEATH	LIVED_YEARS	LIVED_MONTHS	LIVED_DAYS
Jimmy Carter	1924-10-01 00:00:00	Plains, Georgia	2022-05-12 00:00:00	nan	97.7	1168.9	35652.0
George Bush	1924-06-12 00:00:00	Milton, Mass.	2018-11-30 00:00:00	Houston, Texas	94.5	1131.3	34504.0
Gerald Ford	1913-07-14 00:00:00	Omaha, Nebraska	2006-12-26 00:00:00	Rancho Mirage, Cal.	93.5	1119.1	34133.0
Ronald Reagan	1911-02-06 00:00:00	Tampico, Illinois	2004-06-05 00:00:00	Los Angeles, Cal.	93.4	1117.6	34088.0
John Adams	1735-10-30 00:00:00	Quincy, Mass.	1826-07-04 00:00:00	Quincy, Mass.	90.7	1085.9	33119.0
Herbert Hoover	1874-08-10 00:00:00	West Branch, Iowa	1964-10-20 00:00:00	New York, New York	90.3	1080.1	32943.0
Harry S. Truman	1884-05-08 00:00:00	Lamar, Missouri	1972-12-26 00:00:00	Kansas City, Missouri	88.7	1061.4	32373.0
James Madison	1751-03-16 00:00:00	Port Conway, Va.	1836-06-28 00:00:00	Orange Co., Va.	85.3	1021.3	31150.0
Thomas Jefferson	1743-04-13 00:00:00	Albemarle Co., Va.	1826-07-04 00:00:00	Albemarle Co., Va.	83.3	996.6	30397.0
Richard Nixon	1913-01-09 00:00:00	Yorba Linda, Cal.	1994-04-22 00:00:00	New York, New York	81.3	973.4	29688.0

Table 2: Top 10 Shortest-lived Presidents

PRESIDENT	BIRTH_DATE	BIRTH PLACE	DEATH_DATE	LOCATION OF DEATH	LIVED_YEARS	LIVED_MONTHS	LIVED_DAYS
John F. Kennedy	1917-05-29 00:00:00	Brookline, Mass.	1963-11-22 00:00:00	Dallas, Texas	46.5	556.7	16978.0
James A. Garfield	1831-11-19 00:00:00	Cuyahoga Co., Ohio	1881-09-19 00:00:00	Elberon, New Jersey	49.9	596.8	18202.0
James K. Polk	1795-11-02 00:00:00	Mecklenburg Co., N.C.	1849-06-15 00:00:00	Nashville, Tennessee	53.7	642.1	19583.0
Abraham Lincoln	1809-02-12 00:00:00	LaRue Co., Kentucky	1865-04-15 00:00:00	Washington, D.C.	56.2	672.7	20516.0
Chester Arthur	1829-10-05 00:00:00	Fairfield, Vermont	1886-11-18 00:00:00	New York, New York	57.2	684.0	20863.0
Warren G. Harding	1865-11-02 00:00:00	Morrow County, Ohio	1923-08-02 00:00:00	San Francisco, Cal.	57.8	691.5	21091.0
William McKinley	1843-01-29 00:00:00	Niles, Ohio	1901-09-14 00:00:00	Buffalo, New York	58.7	702.0	21412.0
Theodore Roosevelt	1858-10-27 00:00:00	New York, New York	1919-01-06 00:00:00	Oyster Bay, New York	60.2	720.8	21985.0
Calvin Coolidge	1872-07-04 00:00:00	Plymouth, Vermont	1933-01-05 00:00:00	Northampton, Mass.	60.5	724.6	22099.0
Barack Obama	1961-08-04 00:00:00	Honolulu, Hawaii	2022-05-12 00:00:00	nan	60.8	727.7	22196.0

Table 3: Descriptive Statistics

The average and median age of a US president is 72 years. The longest live president is Jimmy Carter who is currently 97 years (35652 days), and the shortest-lived president is John F. Kennedy (JFK) (16978 days) at 46 years and 5 months. The age gap between the longest and shortest-lived presidents is 18674 days about 51 years. The age gap here is greater than the lived years of JFK.

MEAN	WEIGHTED MEAN	MEDIAN	MODE	MAX	MIN	SD
26394.577778	26394.577778	26227.000000	16978	35652	16978	4576.392697

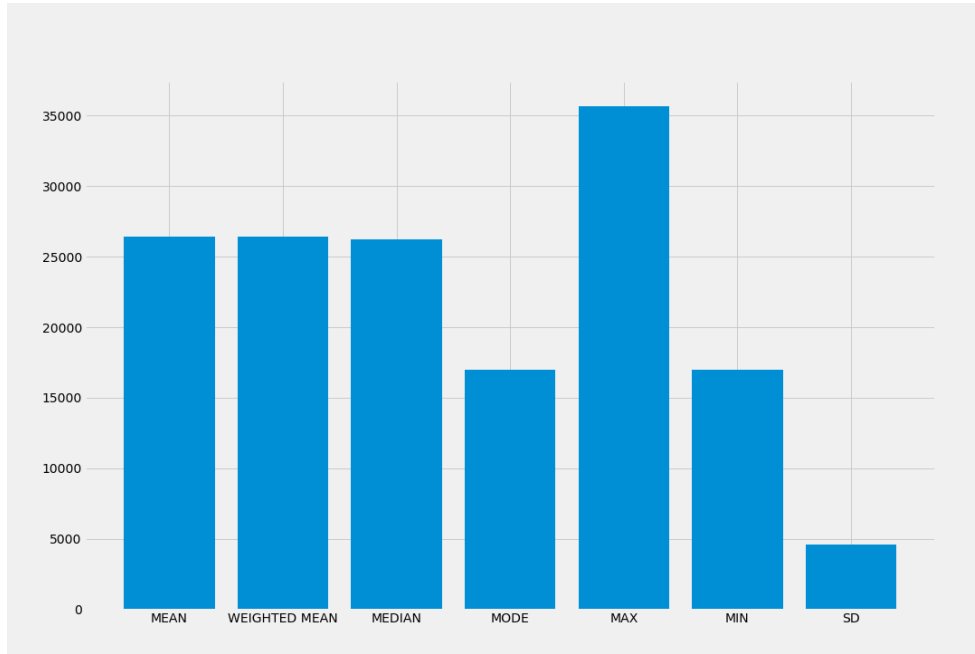


Figure 1: Descriptive Statistics in lived days of presidents

4 Conclusion

The average will likely rise as the US keeps electing older politicians into office. At 78 years old, Joe Biden holds the record for the oldest newest president in history. Given that the former president was 70 at the time of inauguration, the problem of older politicians getting elected to the White House will not be solved anytime soon. We cannot however infer that electing old people is a problem – unless older elected officials have a unique impediment - as the life expectancy throughout the years keeps increasing (a rise from 69 years to 78 years between 1959 and 2014¹). The rise in proper health care, vaccinations, nutrition among other things has contributed to such increases.

¹ Sources: U.S. Census Bureau, 2017 National Population Projections, 2015–2060, and National Center for Health Statistics Life Tables, 1960–2014.