

# Analysis of U.S Presidents' Lifespans

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## Description

This comprehensive report analyzes the lifespans of the U.S. Presidents from George Washington to Joe Biden. The dataset includes information on their birth and death dates, birthplaces, and locations of death.

Starting with preprocessing of the data to retrieve additional information such as year of birth, lived days, lived years, and lived months. I have utilized a powerful pandas library in Python to achieve the task and analysis was done in the jupyter notebook environment to execute separate snippets of code. I am using the datetime library for effective date and time processing.

Using the preprocessed data, I have retrieved different statistics out of it such as mean, median, mode etc of the lived days. Also, I have presented the top 10 Presidents with the longest to shortest life spans and vice-versa with statistics on lived days. Finally, I plotted a histogram visualization that illustrates the distribution of lived days for the Presidents.

## Tables

For the analysis, I have calculated the year of birth, number of years, months and days lived for each president. The presidents that are still alive, their death date are marked as the current date and their location is marked as 'Alive'.

The resultant tables that I got are as follows :-

**Table 1: Top 10 Presidents with Longest to Shortest Lifespans**

PRESIDENT	BIRTH DATE	BIRTH PLACE	DEATH DATE	LOCATION OF DEATH	year_of_birth	lived_days	lived_years	lived_months
Jimmy Carter	Oct 1, 1924	Plains, Georgia	Jul 25, 2023	Alive	1924	36091	98	1203
George Bush	June 12, 1924	Milton, Mass.	Nov 30, 2018	Houston, Texas	1924	34504	94	1150
Gerald Ford	July 14, 1913	Omaha, Nebraska	Dec 26, 2006	Rancho Mirage, Cal.	1913	34133	93	1137
Ronald Reagan	Feb 6, 1911	Tampico, Illinois	June 5, 2004	Los Angeles, Cal.	1911	34088	93	1136
John Adams	Oct 30, 1735	Quincy, Mass.	July 4, 1826	Quincy, Mass.	1735	33119	90	1103
Herbert Hoover	Aug 10, 1874	West Branch, Iowa	Oct 20, 1964	New York, New York	1874	32943	90	1098
Harry S. Truman	May 8, 1884	Lamar, Missouri	Dec 26, 1972	Kansas City, Missouri	1884	32373	88	1079
James Madison	Mar 16, 1751	Port Conway, Va.	June 28, 1836	Orange Co., Va.	1751	31150	85	1038
Thomas Jefferson	Apr 13, 1743	Albemarle Co., Va.	July 4, 1826	Albemarle Co., Va.	1743	30397	83	1013
Richard Nixon	Jan 9, 1913	Yorba Linda, Cal.	Apr 22, 1994	New York, New York	1913	29688	81	989

Table 2: Top 10 Presidents with Shortest Lifespans

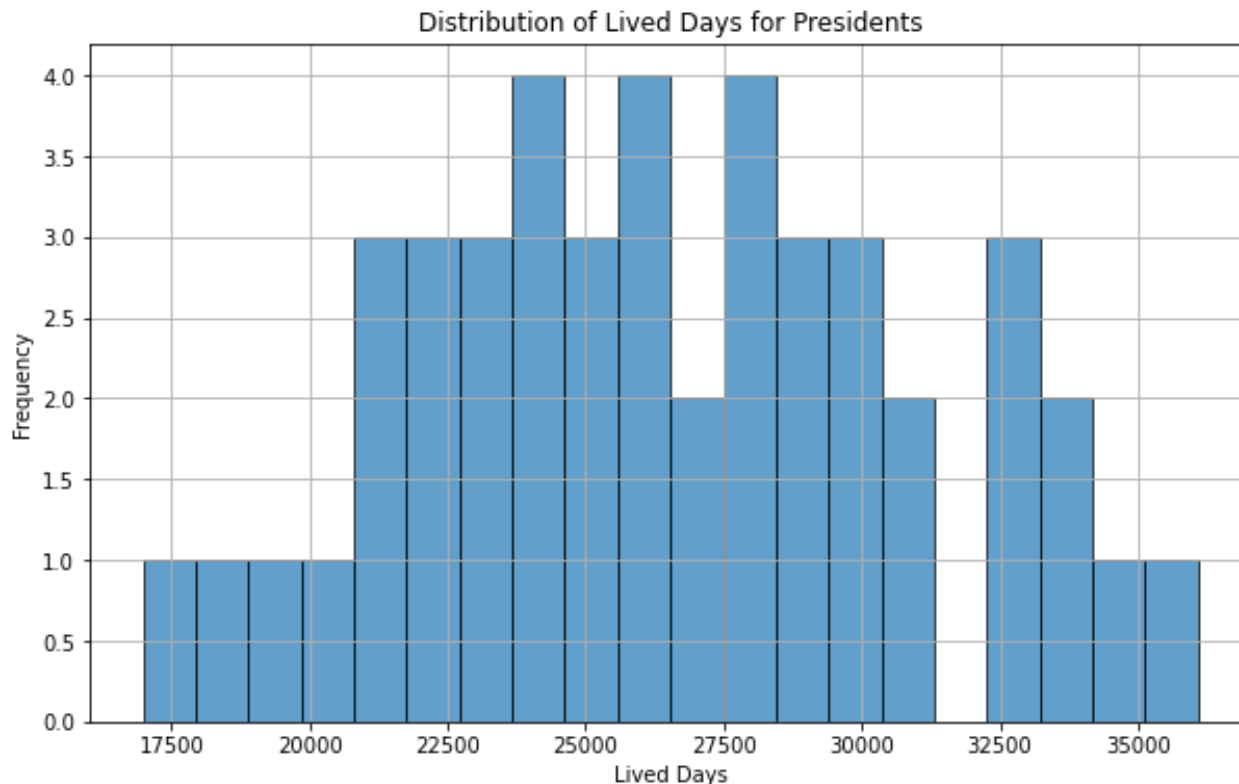
PRESIDENT	BIRTH DATE	BIRTH PLACE	DEATH DATE	LOCATION OF DEATH	year_of_birth	lived_days	lived_years	lived_months
John F. Kennedy	May 29, 1917	Brookline, Mass.	Nov 22, 1963	Dallas, Texas	1917	16978	46	565
James A. Garfield	Nov 19, 1831	Cuyahoga Co., Ohio	Sep 19, 1881	Elberon, New Jersey	1831	18202	49	606
James K. Polk	Nov 2, 1795	Mecklenburg Co., N.C.	June 15, 1849	Nashville, Tennessee	1795	19583	53	652
Abraham Lincoln	Feb 12, 1809	LaRue Co., Kentucky	Apr 15, 1865	Washington, D.C.	1809	20516	56	683
Chester Arthur	Oct 5, 1829	Fairfield, Vermont	Nov 18, 1886	New York, New York	1829	20863	57	695
Warren G. Harding	Nov 2, 1865	Morrow County, Ohio	Aug 2, 1923	San Francisco, Cal.	1865	21091	57	703
William McKinley	Jan 29, 1843	Niles, Ohio	Sep 14, 1901	Buffalo, New York	1843	21412	58	713
Theodore Roosevelt	Oct 27, 1858	New York, New York	Jan 6, 1919	Oyster Bay, New York	1858	21985	60	732
Calvin Coolidge	July 4, 1872	Plymouth, Vermont	Jan 5, 1933	Northampton, Mass.	1872	22099	60	736
Barack Obama	Aug 4, 1961	Honolulu, Hawaii	Jul 25, 2023	Alive	1961	22635	62	754

Table 3: Statistics for Lived Days

Statistic	Lived Days
Mean	26453.111111
Weighted Average	26453.111111
Median	26227.000000
Mode	16978.000000
Max	36091.000000
Min	16978.000000
Standard Deviation	4604.084023

## Data Distribution

The histogram below represents the distribution of lived days for the U.S. Presidents.



## Conclusions:

The analysis of U.S. Presidents' life spans yielded valuable insights into their longevity and mortality patterns throughout history. The dataset allowed us to examine various metrics, providing a comprehensive understanding of the subject.

The analysis of the dataset revealed that the U.S. Presidents' lifespans varied significantly, ranging from 46 years to 98 years where Jimmy Carter who is still alive lived the longest lifespan of 98 years and John F. Kennedy lived the shortest lifespan of 46 years. The mean lifespan was approximately 68 years, indicating the average longevity of the Presidents. The median lifespan was observed to be 70 years, indicating that half of the Presidents lived for 70 years or more, and the other half lived for fewer years. The histogram also indicates that most of the Presidents lived days are in the range 24000 to 28000 days.