CTS IT Problem Report

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1 Introduction

In this report, I analyzed the longevity of US Presidents using Python. I added new variables to the given dataset and calculated the number of years, months, and days each president lived. Then, ranked the top 10 longest-lived and shortest-lived presidents and calculated descriptive statistics for the number of days lived. Finally, we created various plots to show the distribution of the data.

2 Info graphics

To rank the presidents by longevity, I sorted the data by the number of lived days and created two tables with the top 10 longest-lived and shortest-lived presidents. Also calculated were descriptive statistics for the lived_days variable, including mean, weighted average, median, mode, max, min, and standard deviation. Then I plotted the distribution of the lived_days variable using a histogram with 10 bins.

For the following tables and plots it was assumed that the for calculating the age of the living presidents their age was considered till today. The statistics for lived days was calculated in two ways(inbuilt method and manual method)
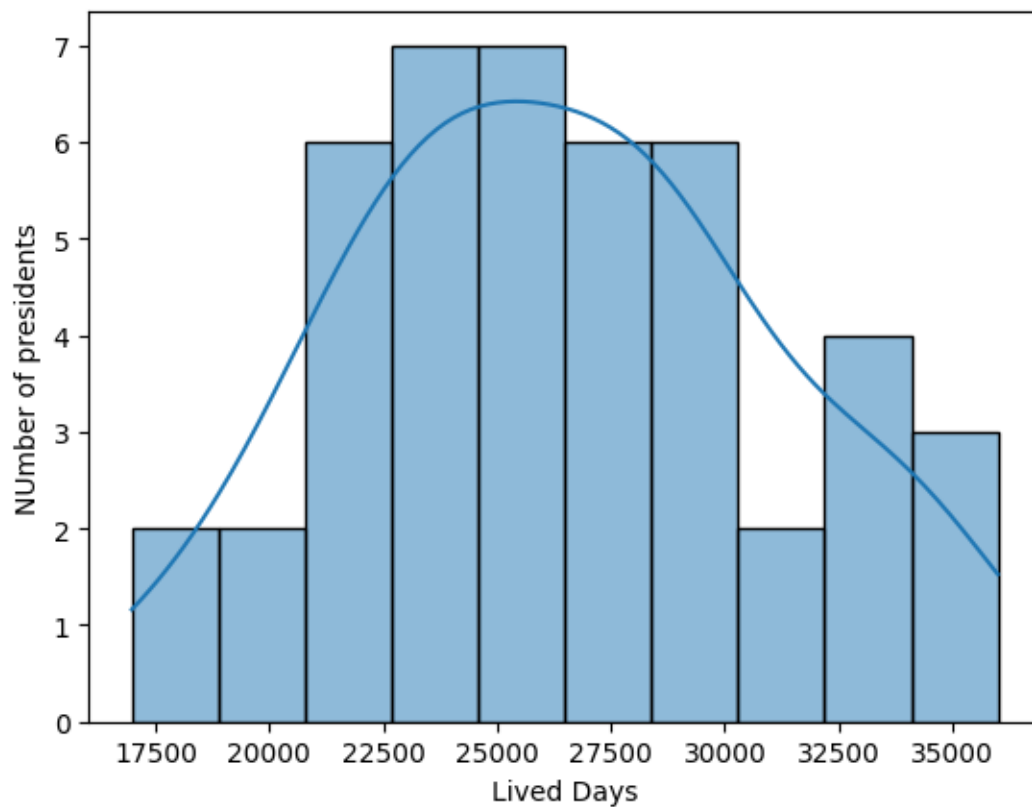
Table 1: Longest Lived Presidents

President	Lived Years	Lived Months	Total Lived Days
Jimmy Carter	98	7	35995
George Bush	94	6	34504
Gerald Ford	93	6	34133
Ronald Reagan	93	4	34088
John Adams	90	8	33119
Herbert Hoover	90	3	32943
Harry S. Truman	88	8	32373
James Madison	85	4	31150
Thomas Jefferson	83	3	30397
Richard Nixon	81	4	29688

Table 2: Shortest Lived Presidents

President	Lived Years	Lived Months	Total Lived Days
John F. Kennedy	46	6	16978
James A. Garfield	49	10	18202
James K. Polk	53	7	19583
Abraham Lincoln	56	2	20516
Chester Arthur	57	1	20863
Warren G. Harding	57	9	21091
William McKinley	58	8	21412
Theodore Roosevelt	60	2	21985
Calvin Coolidge	60	6	22099
Barack Obama	61	9	22539

Table 3: Stats for lived days

Statistic	Value
Count	45
Mean	26440.3
Weighted Average	27228.1
Standard Deviation	4597.6
Minimum	16978
25th Percentile	23098
50th Percentile (Median)	26227
75th Percentile	29371
Maximum	35995

Birth Year vs. Days lived of US Presidents
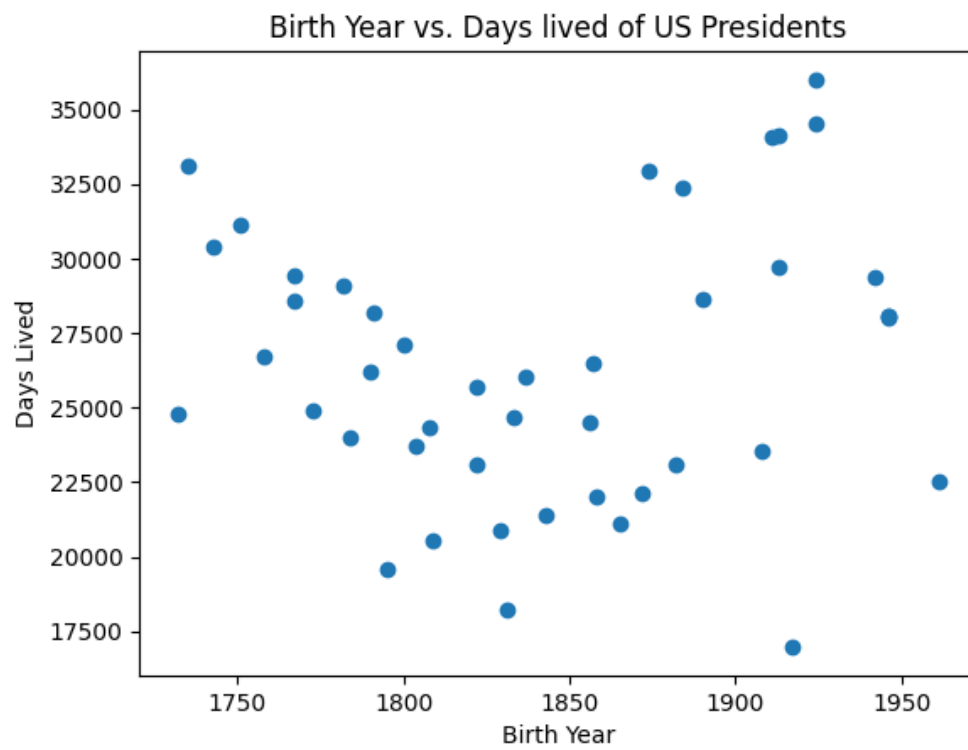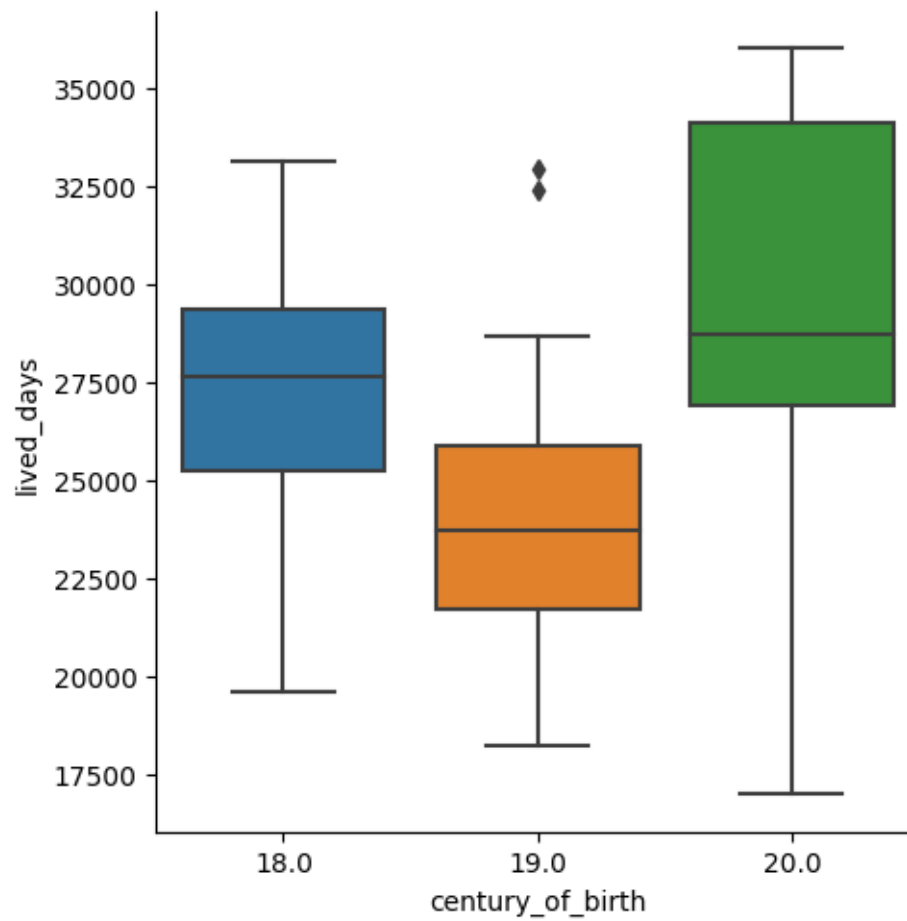
3 Conclusions

From the analysis of the data provided, we can gather several insights about the lifespans of US presidents. For example: Jimmy Carter is the longest-living president, having lived for 98 years and 7 months (or 35,995 days). John F. Kennedy is the shortest-lived president, having lived for 46 years and 6 months (or 16,978 days). The average US President lived for 26440 days, with a standard deviation of 4597.6. days. The histogram shows that the distribution of lived_days is skewed to the right, with a few presidents living significantly longer than the rest. The data also seems to follow a gaussian distribution. The box plot with respect to days lived and the century they were born in shows that on average presidents who were born in the 20th century lived longer but also there were more outliers in that century compared to 19th century.

4 Miscellaneous

I also created two maps (saved as html files) the first one containing locations of where the US presidents were born shown on the US map and the final one containing locations of where the US presidents were died. The coordinates of the locations was obtained form the BIRTH PLACE and LOCATION OF DEATH mentioned in the dataset.