

Exploring the relationship between visa cases, salary and adjusted salary after cost of living

Introduction

We have a valuable dataset to explore various aspects related to visa cases, salaries and regional price variations. By analyzing this data, we aimed to uncover trends, correlations and patterns that could provide valuable insight for decision making for job seekers in the US.

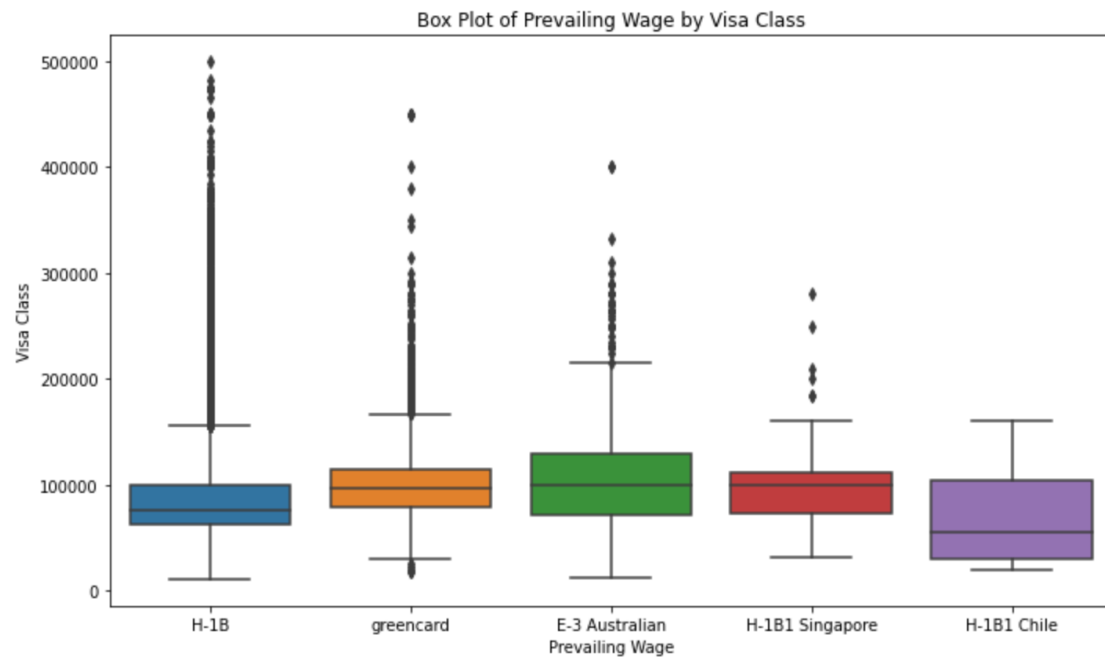
Here are some interesting questions to ask from this data:

- How does the distribution of salary vary across different visa classes? Does visa category affect salary?
- Which visa class has the highest salary?
- How does the median salary differ in various states? Which states has the highest salary, adjusted after the cost of living?
- Which job titles has the highest and lowest median salary?
- Is salary likely to increase?
- Which companies that pay the highest for data-related role?

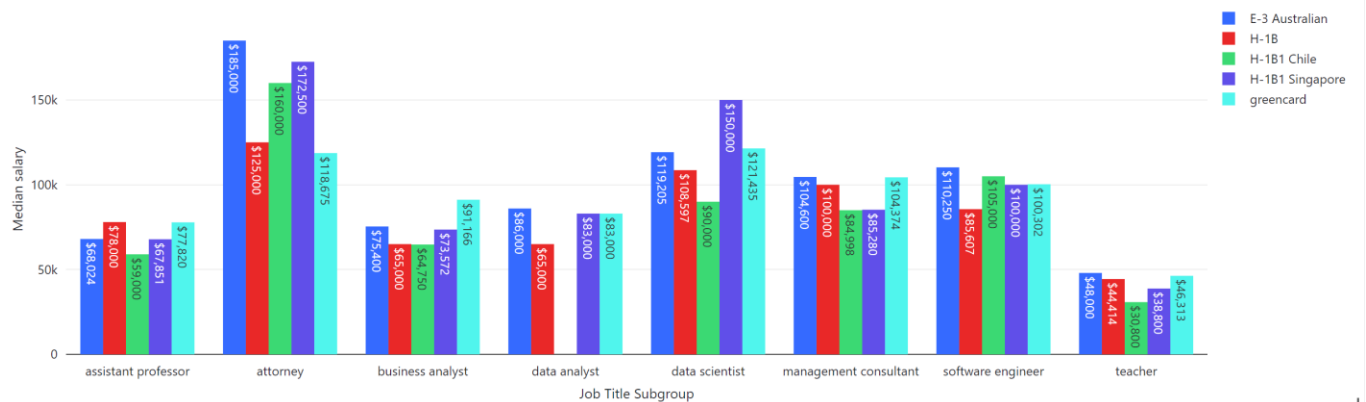
Our goal is to find answers to these questions, so we can help job seekers make better decisions about their careers. This analysis will uncover valuable information about the job opportunities and trends in the industry.

Let's get started with the exploration!

How does the distribution of salary vary across different visa classes?



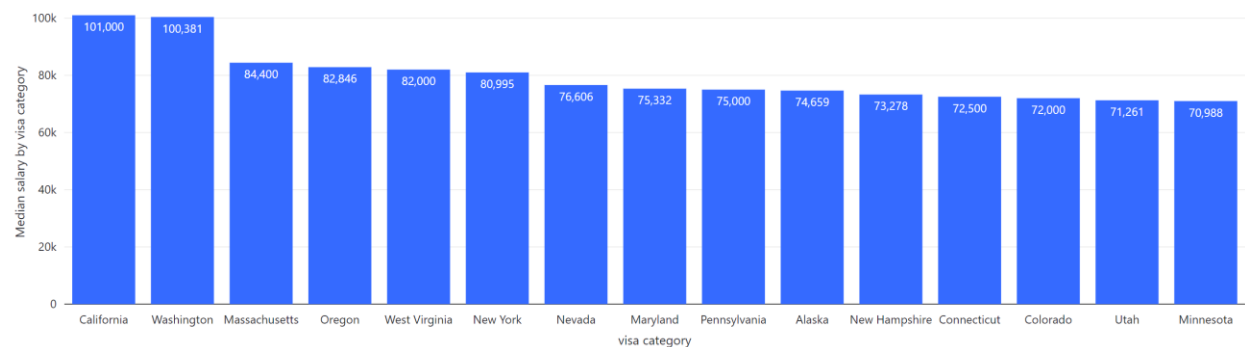
Does visa category affect salary?



Based on the graph above, it appears that visa class seems to have minimal impact on wages.

How does the median salary vary across different states? What are the states with the highest median salaries, adjusted after cost of living?

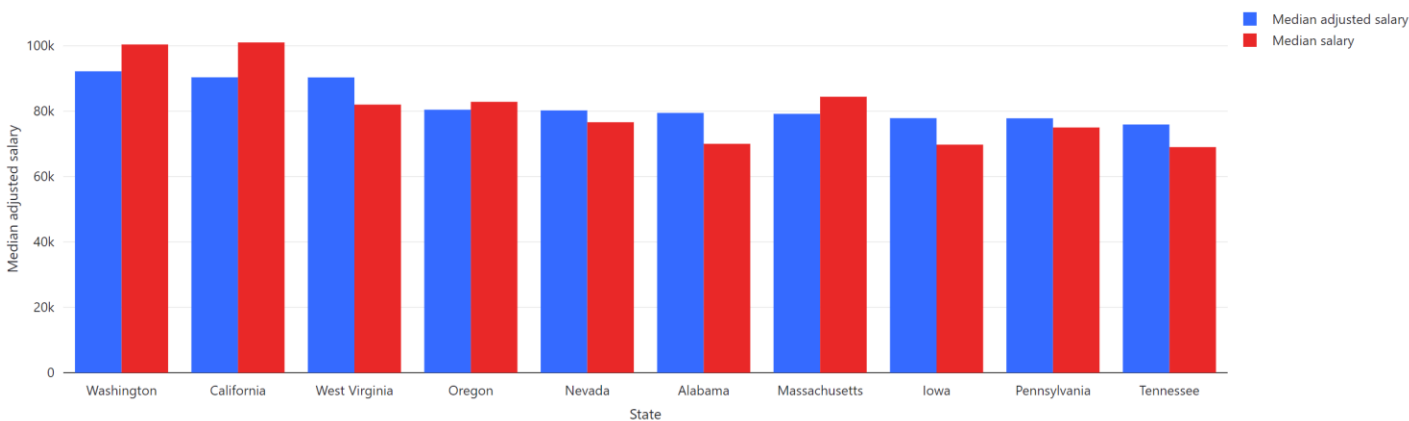
. As we can see, the top 3 states offers the highest median salary are CA, WA and MA.



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Top 10 states with the highest median salary (in USD)

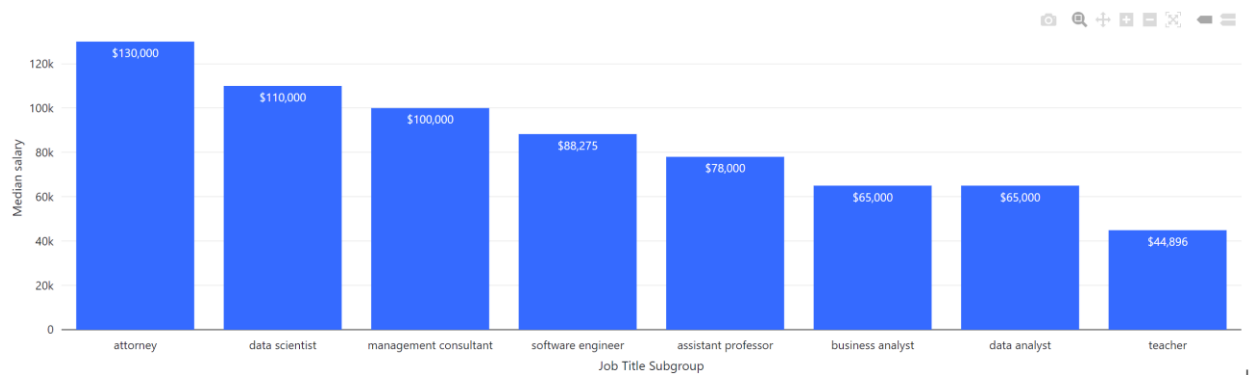
Leveraging price parity data, we now consider the cost of living. Looking at below chart, California doesn't seem as appealing as it used to be. If you're fond of mountains, Washington might offer higher salaries. Interestingly, living in West Virginia could give you more value for your money compared to Massachusetts.



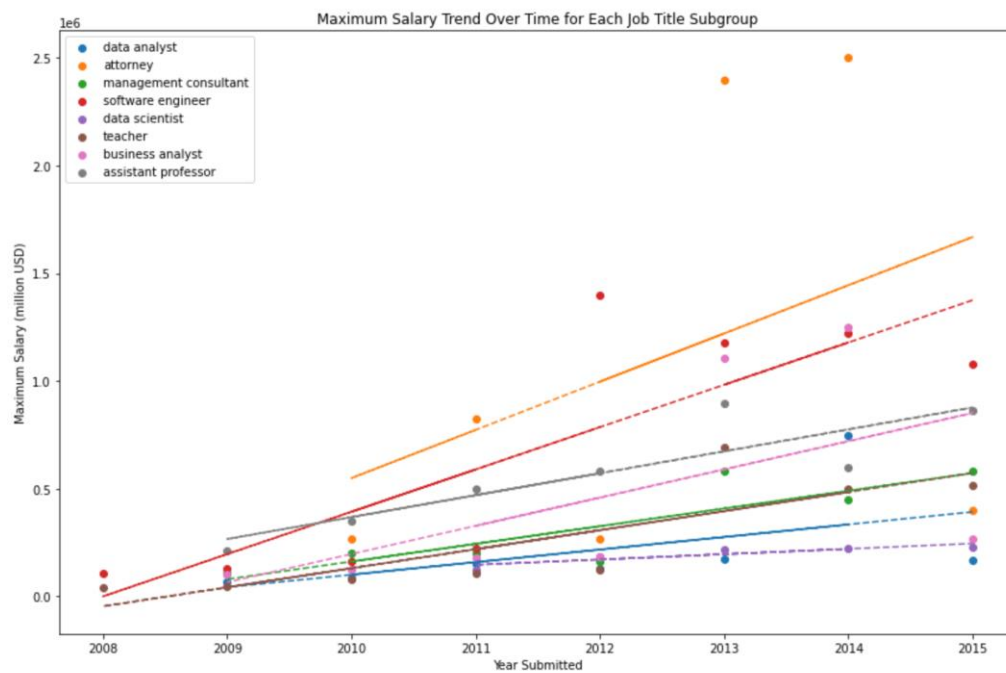
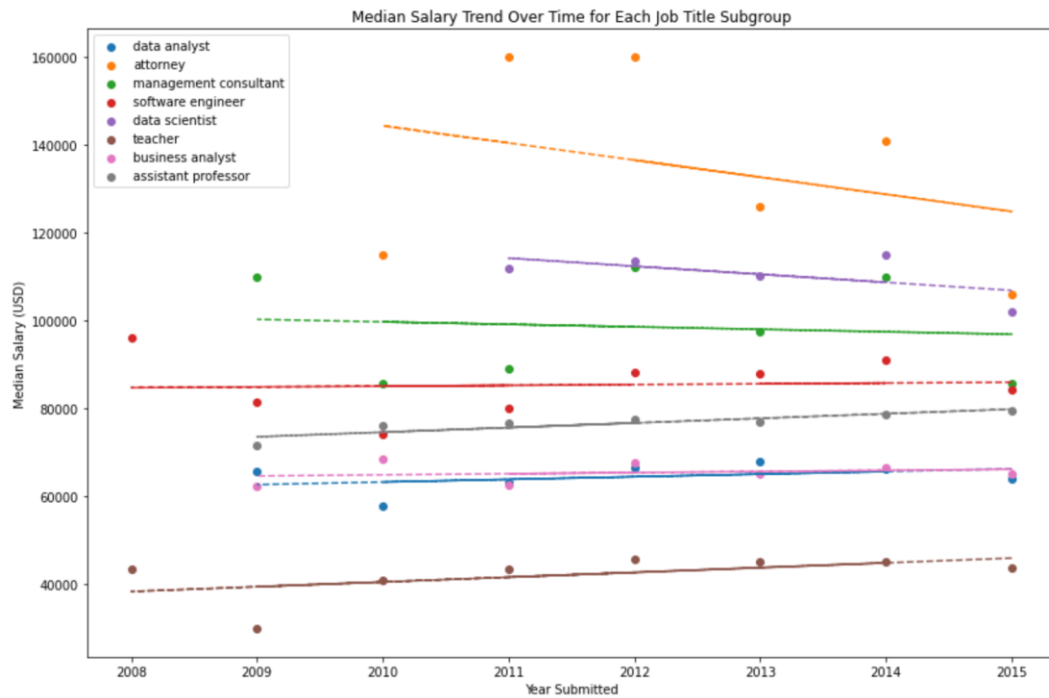
Top 10 states with highest median adjusted salary (in USD)

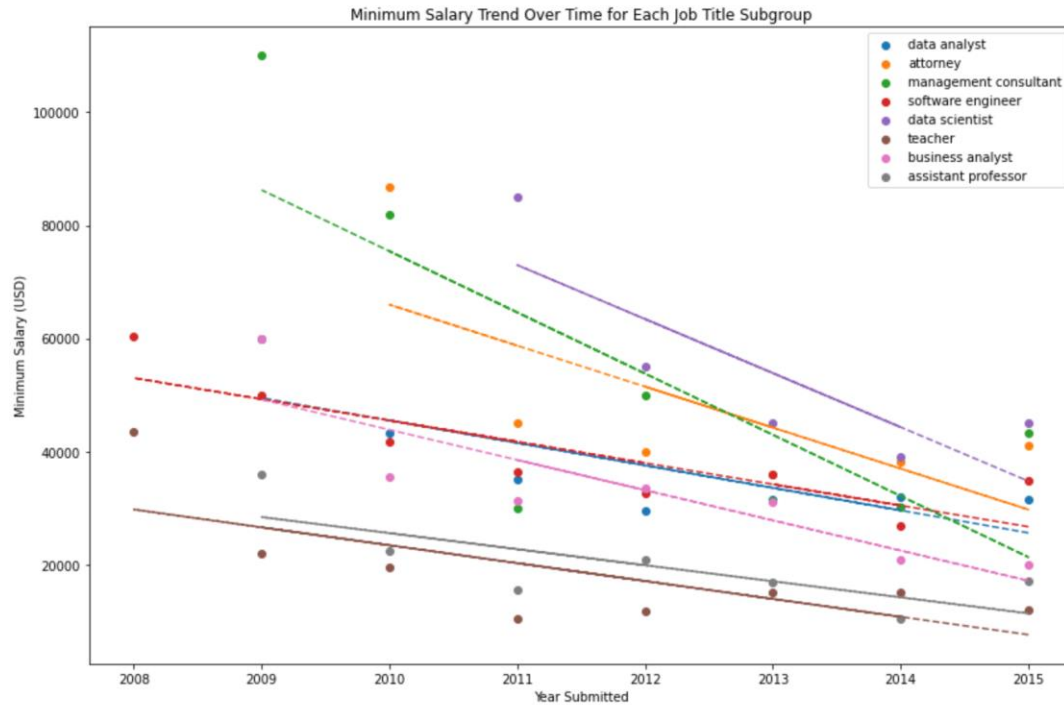
Which job titles has the highest and lowest median salary?

Among the professions analyzed, it appears that attorneys enjoy the highest median salary, while teachers, unfortunately, receive the lowest pay.



Is salary likely to increase (from 2008-2015)?





The findings indicate a potential rise in the number of opportunities to secure lucrative salaries in data scientist and software engineering roles. However, the median salary for most positions appears to remain relatively stable over time. Interestingly, the minimum salary also shows a downward trend over time.

Which companies offers the highest salary for data-related positions?

Here are the top 10 companies that provide the highest salaries, taking into account the adjusted cost of living.

Data analyst

EMPLOYER_NAME	median_adjusted_salary	rnk	total_records
INTUIT	\$387,443	1	2
KNOWLEDGENT GROUP INC.	\$169,569	2	1
NETFLIX, INC.	\$167,710	3	4
AMICUS SYSTEMS INC	\$151,963	4	4
WEATHERFORD INTERNATIONAL, INC.	\$150,254	5	1
AVISO, INC.	\$147,585	6	1
TELADOC INC	\$146,199	7	1
FIRST REPUBLIC BANK	\$143,113	8	1
ENGAGEPOINT, INC.	\$139,130	9	1
KNIGHT CAPITAL AMERICAS, L.P.	\$137,489	10	1

Data scientist

EMPLOYER_NAME	median_adjusted_salary	rnk	total_records
THE PNC FINANCIAL SERVICES GROUP, INC.	\$212,656	1	1
NETFLIX	\$196,780	2	1
THE MATLEN SILVER GROUP, INC.	\$188,486	3	1
ADOBE SYSTEMS INCORPORATED	\$163,744	4	4
BED BATH AND BEYOND, INC.	\$160,403	5	1
ADARA MEDIA, INC.	\$159,213	6	3
SMASH ANALYTICS, INC.	\$158,562	7	1
HEALTHCARE ANALYTICS SERVICES HOLDING INC.	\$155,119	8	1
INTENT MEDIA INC.	\$148,858	9	1
DATAMINR, INC.	\$148,402	10	2

Business analyst

EMPLOYER_NAME	median_adjusted_salary	rnk	total_records
CONSULTADD INC	\$975,610	1	1
THE UNIVERSITY OF TEXAS SYSTEM ADMINISTRATION	\$687,825	2	4
OFFICEMAX INCORPORATED	\$595,376	3	2
ASCENDUM SOLUTIONS, LLC	\$297,410	4	1
ELIE TAHARI LTD.	\$200,913	5	1
THE MATLEN SILVER GROUP, INC.	\$188,486	6	1
BAHA INDUSTRIES CORP.	\$177,665	7	1
B & R WHOLESALE FLOWER DBA RIVER OAKS PLANT HOUSE	\$174,825	8	1
HIREPOWER PERSONNEL, INC.	\$172,102	9	2
POPULUS GROUP, LLC	\$168,934	10	1

Summary

After examining the data on visa cases, salaries, and regional price variations in the US, we learned some important insights for job seekers:

- Visa Class Impact: Different visa classes don't seem to have a big effect on salaries. Most jobs offer similar pay regardless of visa category.
- Regional Salary Differences: States like California, Washington, and Massachusetts offer the highest median salaries, even after considering living costs. On the other hand, West Virginia might give more value for money compared to Massachusetts.
- Job Titles and Salaries: Attorneys have the highest median salary, while teachers face lower pay.
- Salary Trends: Generally, salaries have remained stable from 2008 to 2015, but minimum salaries have slightly decreased over time.
- Lucrative Companies: We found the top 10 companies offering the highest salaries for data-related roles, considering living costs.

Future Analysis

As we keep exploring the US job market, we can add more data to understand job opportunities better. Important data like taxes, weather, and other regional factors can help job seekers know more about living conditions and financial prospects in different states.

Data model

fact_visa_cases

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- Case Number (PK)
- Case Status
- Case Received Date
- Visa Class
- Employer Name
- Work State
- Job Title
- Paid Wage Per Year
- Job Title Subgroup
- Country Of Citizenship

dim_price_index

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- State_abbreviation (PK)
- state (FK)
- price_parity_index

Databricks source code

Databricks built-in visualization:

<https://databricks-prod-cloudfront.cloud.databricks.com/public/4027ec902e239c93eaaa8714f173bcfc/8710817708807444/2864258986573449/5782777213607922/latest.html>

ETL codes and data visualization:

<https://databricks-prod-cloudfront.cloud.databricks.com/public/4027ec902e239c93eaaa8714f173bcfc/8710817708807444/4054946391772241/5782777213607922/latest.html>

Data source

- Salary data: United States Department of Labor (2015 visa application)
- Price Parity Data: 2013 Regional Price Parities - US Department of Commerce - Bureau of Economic Analysis