Data Analyst Jobs Analysis (GlassDoor)

What can we learn about open Data Analyst positions in the US by analyzing a collection of over 2500 jobs scraped from Glassdoor.com

Questions to Answer:

- What sectors are hiring Data Analysts?
- What sectors and postions pay the best?
- What sort of Data Analyst positions are the most enjoyable as an employee?
- What cities and states have the most open job positions.

Overview

The following dashboard attempts to answer various questions about the location, pay, and employee satisfaction of vacant Data Analyst jobs across the United States. The data itself was scraped from Glassdoor.com. This job site compiles vacant job listings from across the US, detailing the employer's explanation of the position along with data on pay and job satisfaction from previous employees. The dataset analyzed contains more than 2000 posted jobs . The columns in the dataset are as follows. 'Job Title', 'AvgSal', 'Sal_estlow', 'Sal_esthigh', 'Salary Estimate', 'Job Description', 'Rating', 'Company Name', 'City', 'State', 'Size', 'Founded', 'Type of ownership', 'Industry', 'Sector'.

The dataset was created by Github user 'Picklesueat' and can be accessed using the bulleted link below. I also did additional data cleaning before connecting the dataset to Tableau to make it easier to work with inside tableau. I used Python to accomplish this data cleaning and the complete cleaning code can be found at the second link listed below.

-Link to Original Dataset: https://github.com/picklesueat/data_jobs_data

-Link to Data-cleaning code (Python): https://github.com/Tolevas/Data-Analyst-Jobs-Cleaning/blob/main/JobsCleaningCode.ipynb

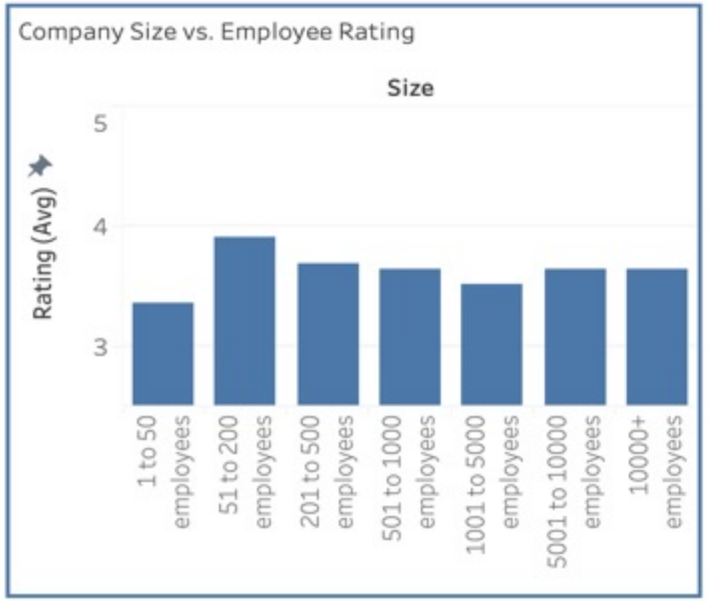
Assumptions and Limitations

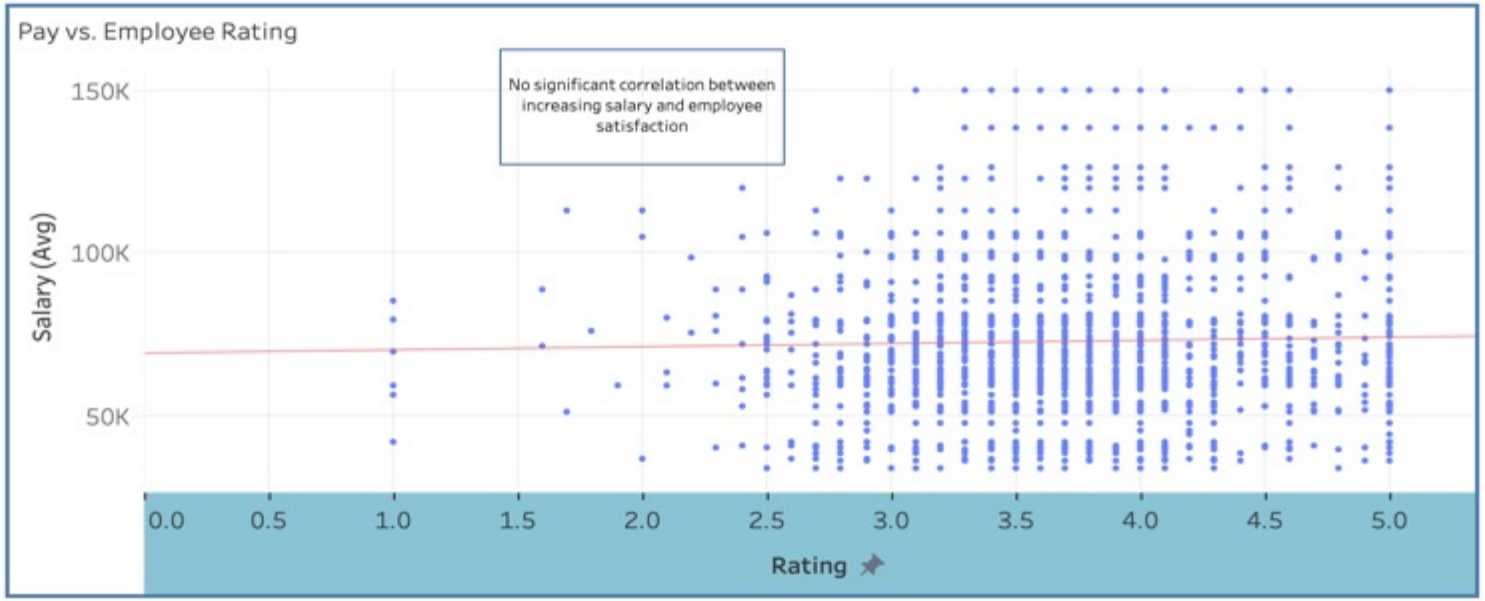
Assumptions:

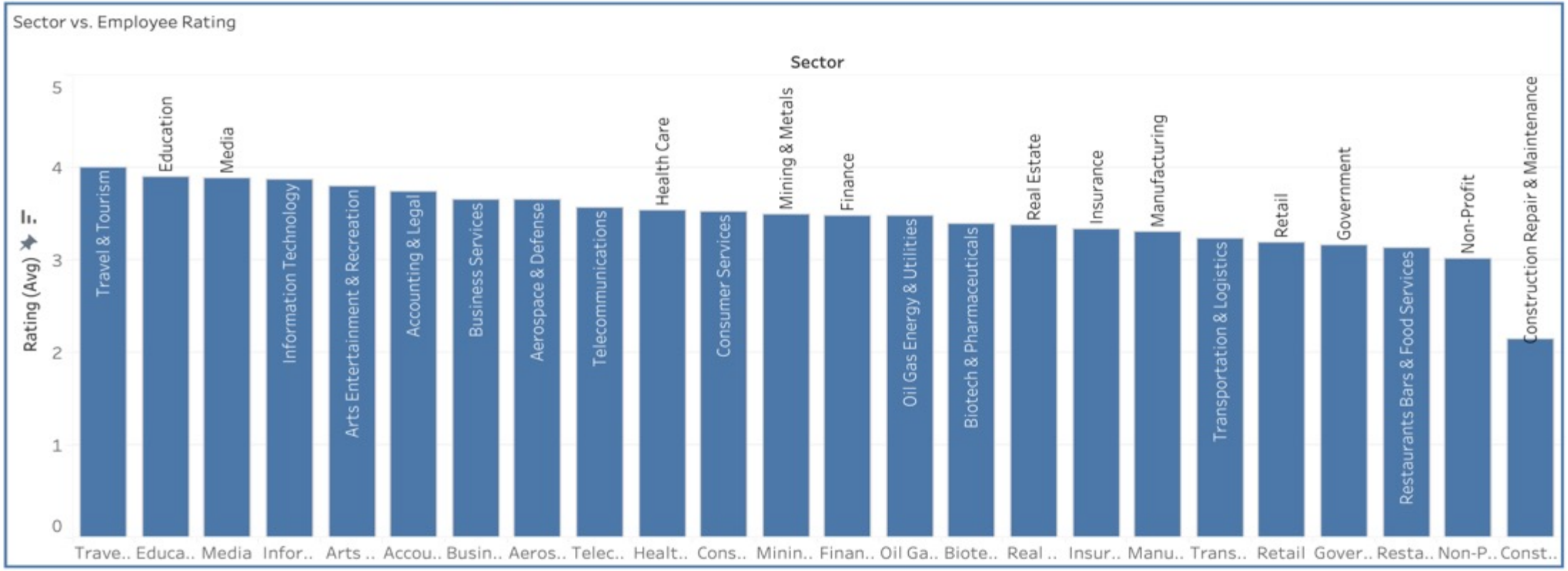
- Glassdoor is assumed to post accurate/up-to-date information on Data Analyst jobs
- Companies job postings are assumed to be truthful in their description of the position/responsibilities.
- GitHub user 'Picklesueat' is assumed to have crawled Glassdoor.com's site correctly, without corrupting the dataset

Limitations:

- Job titles/descriptions vary widely making it difficult to group jobs based on specific responsibilities and required skills
- There are approximately 2500 jobs in the dataset this sample may not be representative of all open Data Analyst positions in the US.
- Most jobs don't post salary ranges and therefore all salary data used in analysis is estimated by GlassDoor.com
- Many rows in the dataset are missing information from one or more of the important fields and therefore can't be used for analysis


Company Size vs. Employee Rating
Size
Rating (Avg)
5
4
3
1 to 50 employees
51 to 200 employees
201 to 500 employees
501 to 1000 employees
1001 to 5000 employees
5001 to 10000 employees
10000+ employees

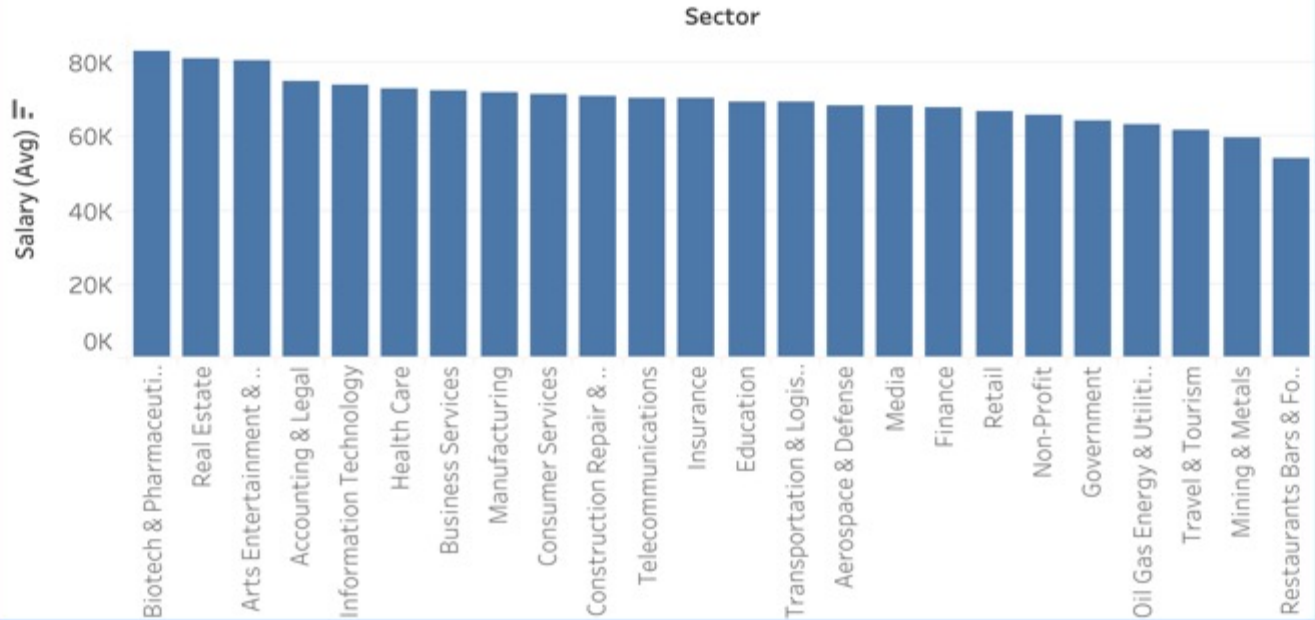

Pay vs. Employee Rating
No significant correlation between increasing salary and employee satisfaction
Salary (Avg)
150K
100K
50K
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Rating


Sector vs. Employee Rating
Sector
Rating (Avg)
5
4
3
2
1
0
Travel & Tourism
Education
Media
Information Technology
Arts Entertainment & Recreation
Accounting & Legal
Business Services
Aerospace & Defense
Telecommunications
Health Care
Consumer Services
Mining & Metals
Finance
Oil Gas Energy & Utilities
Biotech & Pharmaceuticals
Real Estate
Insurance
Manufacturing
Transportation & Logistics
Retail
Government
Restaurants Bars & Food Services
Non-Profit
Construction Repair & Maintenance
Trave..
Educa..
Media
Infor..
Arts ..
Accou..
Busin..
Aeros..
Telec..
Healt..
Cons..
Minin..
Finan..
Oil Ga..
Biote..
Real ..
Insur..
Manu..
Trans..
Retail
Gover..
Resta..
Non-P..
Const..

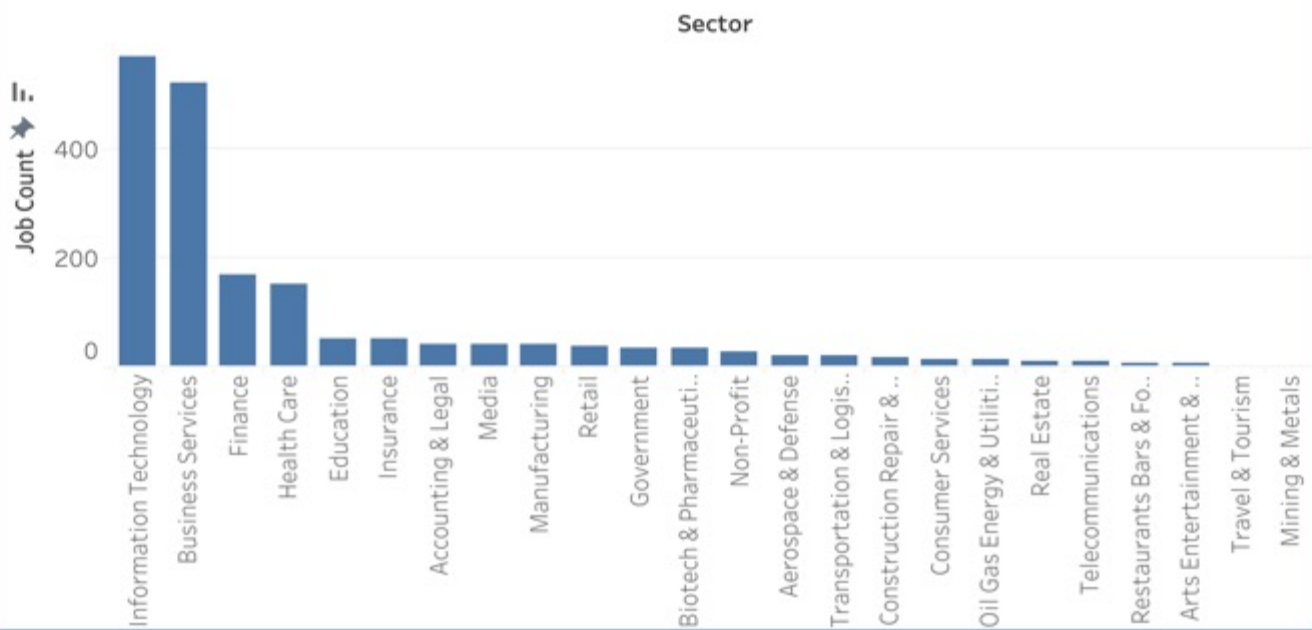

Sector
(All)
Accounting & Legal
Aerospace & Defense
Arts Entertainment...
Biotech & Pharmac...
Business Services
Construction Repai...
Consumer Services
Size
(All)
1 to 50 employees
51 to 200 employees
201 to 500 employe...
501 to 1000 emplo...
1001 to 5000 empl...
5001 to 10000 emp...
10000+ employees
NaN
Unknown
Cancel
Apply
Company Count
1
570

Available Jobs by Location

Sector vs. Pay



Job Postings per Sector



Sector

- (All)
- Accounting & Legal
- Aerospace & Defense
- Arts Entertainment...
- Biotech & Pharmac...
- Business Services
- Construction Repai...
- Consumer Services
- Education
- Finance

Cancel Apply

Available Jobs

1 570

Average Salary

54,000 83,106

Findings and Conclusions

The following data and dashboarding process led to a number of interesting findings. Many of them were unexpected. The following list compiles the most significant of those findings. The final section discusses the significance of those findings and how they apply to my job search.

Findings:

- There is no clear relationship between increasing salary and employee satisfaction. While employee satisfaction did show minimal improvement with increases in average salary, the relationship was not found to be statistically significant (p-value=0.59)
- Sectors such as arts/education, travel/tourism, and education have significantly higher rates of employee satisfaction than other sectors such as government, oil/gas, and Nonprofit.
- No clear relationship between company size and employee satisfaction. Companies with under 50 employees are the exception. Rates of employee satisfaction are significantly lower than those in larger companies.
- Majority of jobs are located around tech hubs (New York, Los Angeles, and Silicon Valley) but there are opportunities in smaller markets as well.
- Certain sectors (Information Technology, Finance, etc) account for vast majority of open positions

My Conclusions:

- Employee satisfaction is important metric in searching for a job. Look for jobs in industries and with companies that have good track record of taking care of their employees.
- Avoid looking for position at small companies (1-50 employees) as they have lower average employee satisfaction rating.
- The vast majority of Data Analyst jobs are concentrated in only a few sectors (IT, Finance, Healthcare, etc). These sectors are likely the most sensible place to start a job search as they have the greatest number of opportunities with the greatest geographic diversity.
- IT, Business Services, and Healthcare sectors rank well in average salary, employee satisfaction, and number of available jobs. These sectors are a good place to focus my search