

THE GREATEST JOB SATISFACTION SOIREE PROJECT 1

TEAM 4

TEAM MEMBERS

Contributors 3



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GILEVO



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About

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INTRODUCTION

The term 'job satisfaction' has various meanings. There are many factors involved to measure or quantify this "satisfaction".

Our project has utilised the Glassdoor Job Reviews dataset from Kaggle to analyse the multidimensional sentiments of various job descriptions based on the ratings from 1 to 5 on different categories such as work-life balance, career opportunities, senior management and so on.

DATASET

Glassdoor Job Reviews

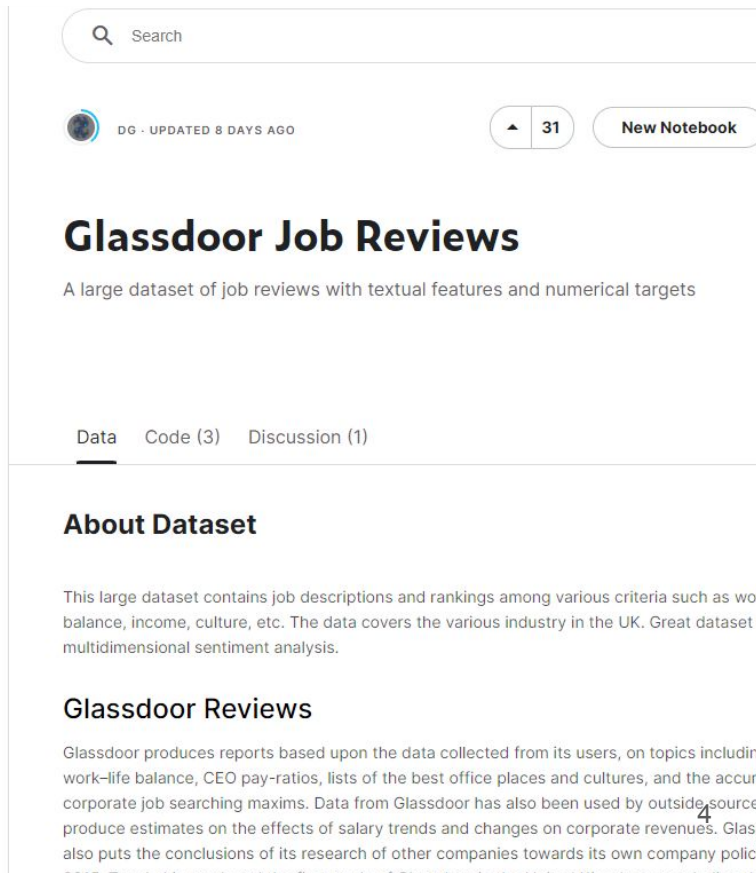
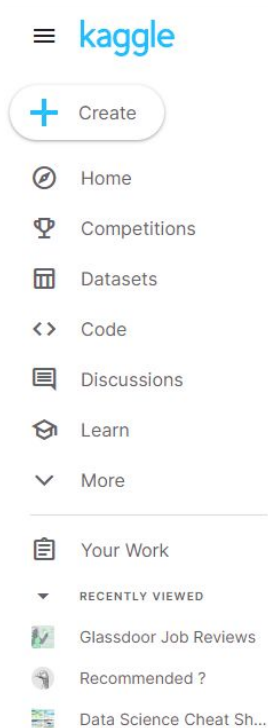
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Source : <https://www.kaggle.com/davidgauthier/glassdoor-job-reviews>

DATASET SUMMARY

GLASSDOOR JOB REVIEWS

A large dataset contains job descriptions and rankings among various criteria such as work-life balance, income, culture, etc. The data covers the various industries in the UK. Great dataset for multidimensional sentiment analysis.



CHALLENGES WITH THIS DATASET

- Due to the size of this dataset, our greatest challenge was getting our Git Repo to work
- This dataset was full of NULL values, these needed to be replaced with 0
- There were several columns in this dataset that were redundant and removed
- As there are 427 companies in the dataset, analysing all companies across the various metrics was not possible in the time given

OUR RESEARCH QUESTIONS

1. Question 1

What is the relationship between the work environment factors and overall job satisfaction? These will include:

- Work Life Balance
- Career Opportunities
- Diversity Inclusion
- Company Benefits
- Senior Management

2. Question 2

How has an employer's rating changed over the time period sampled, and what are the contributing work environment factors that may contribute to this change?

3. Question 3

Is there a correlation between the region an employee is working in and the overall job satisfaction across the companies sampled?

QUESTION 1

Question 1

What is the relationship between the work environment factors and overall job satisfaction?

FINDINGS:

- *Calculated the Mean of the ratings of each factor and overall rating based on the firms compared the Bottom 5 and Top 5 Firms Overall Ratings vs their various work environment factors*
- *Senior management rating is lower in the bottom five firms but this rating is higher in top five firms. Clearly, senior management have an enormous role to play in employees' engagement and commitment.*
- *It has also been found that there is no impact of Diversity inclusion as this factor has almost the same ratings in both cases.*

```
In [13]: # NM nsmallest() helps to get the smallest numbers from a variable or from a dataset.
overall_rating_lowest= job_satis_na_df.nsmallest(n=5, columns=['overall_rating'])
overall_rating_lowest
```

```
Out[13]:
```

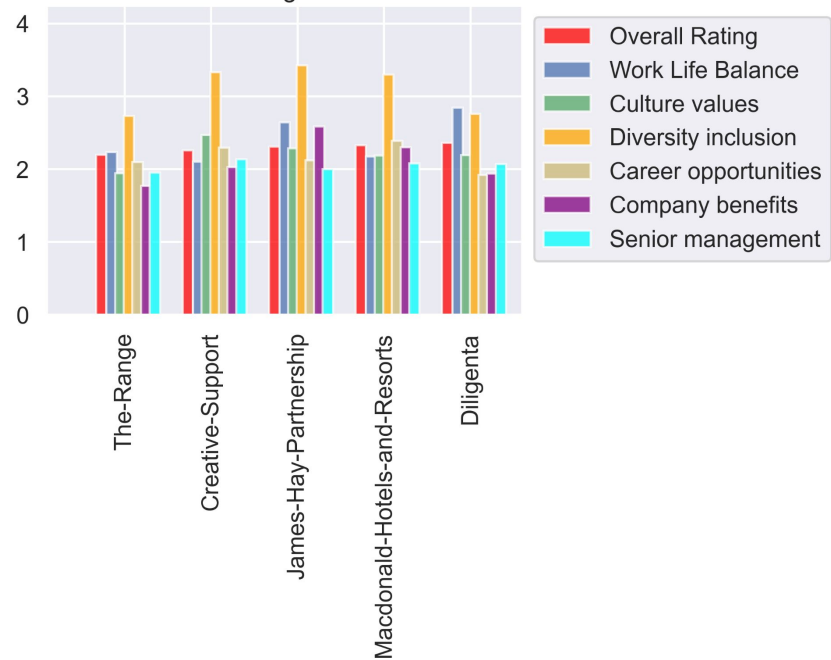
	overall_rating	work_life_balance	culture_values	diversity_inclusion	career_opp	comp_benefits	senior_mgmt
firm							
The-Range	2.200000	2.236842	1.946667	2.734513	2.097884	1.770667	1.954667
Creative-Support	2.257778	2.106599	2.472081	3.333333	2.296482	2.030612	2.139175
James-Hay-Partnership	2.311111	2.645570	2.287500	3.428571	2.125000	2.587500	2.000000
Macdonald-Hotels-and-Resorts	2.330472	2.173709	2.188679	3.300000	2.391509	2.300469	2.080569
Diligenta	2.363636	2.847826	2.195652	2.759259	1.920290	1.942029	2.072464

```
In [14]: # NM nlargest () helps to get the highest numbers from a variable or from a dataset.
overall_rating_largest= job_satis_na_df.nlargest(n=5, columns=['overall_rating'])
overall_rating_largest
```

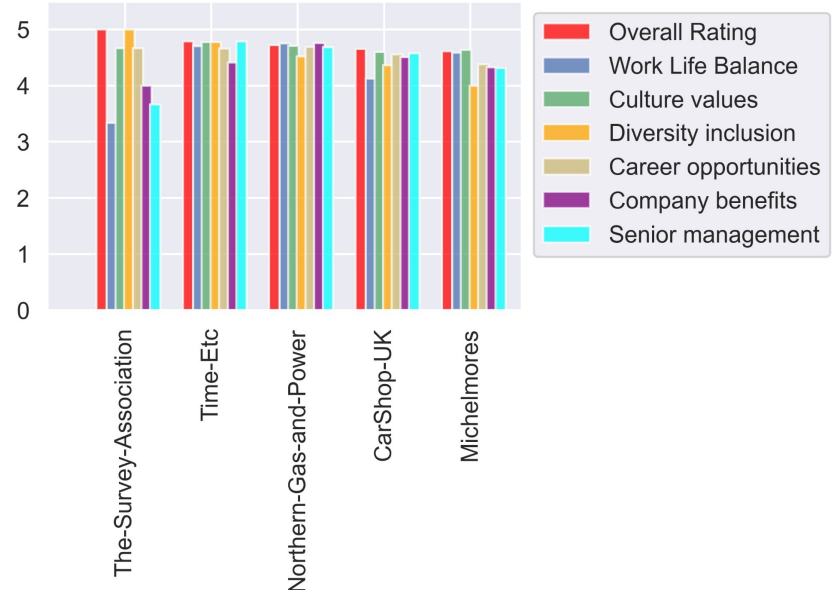
```
Out[14]:
```

	overall_rating	work_life_balance	culture_values	diversity_inclusion	career_opp	comp_benefits	senior_mgmt
firm							
The-Survey-Association	5.000000	3.333333	4.666667	5.000000	4.666667	4.000000	3.666667
Time-Etc	4.785714	4.700000	4.775000	4.777778	4.658537	4.410256	4.789474
Northern-Gas-and-Power	4.719682	4.750000	4.708075	4.517241	4.688660	4.756198	4.683884
CarShop-UK	4.651163	4.127572	4.597510	4.363636	4.553719	4.508264	4.576763
Michelmores	4.610390	4.588235	4.632353	4.000000	4.382353	4.323529	4.313433

Bottom 5 Firms Overall Rating vs Work environment factor



Top 5 Firms Overall Rating v/s Work environment factor



QUESTION 2

Question 2

How has an employer's rating changed over the time period sampled, and what are the contributing work environment factors that may contribute to this change (answered in Q1)?

FINDINGS:

We selected two random companies to review and compare (The-LEGO-Group and Accenture)

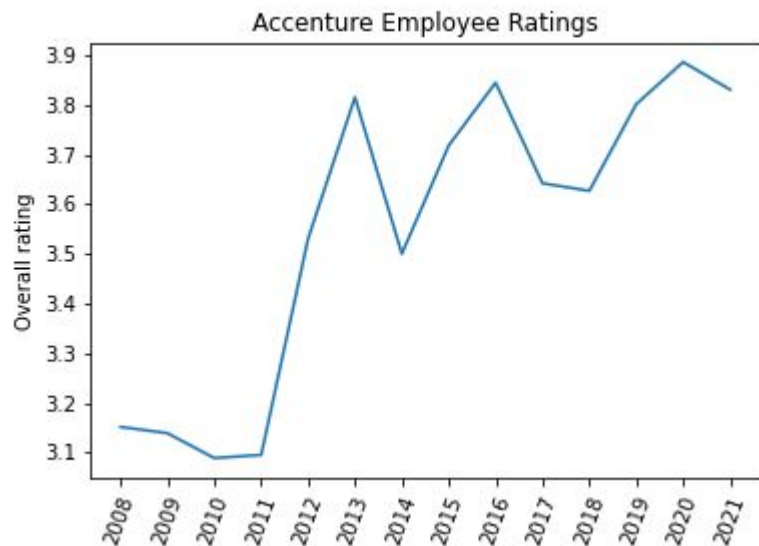
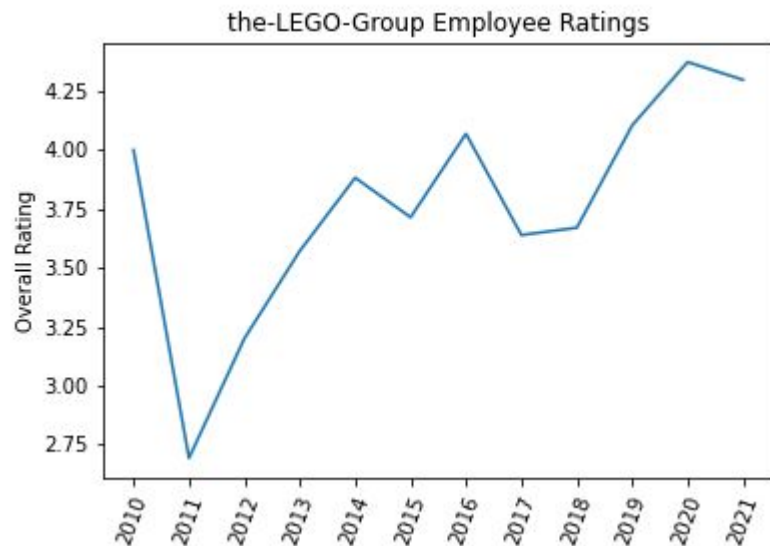
We calculated the average score for each company by year, between 2008 to 2021 for Worklife Balance, Culture Values, Diversity Inclusion, Career Opportunities, Company Benefits and with our isolated focus being on Overall Rating.

The LEGO Group have a consistently high rating across all metrics and their employee satisfaction reviews are strong. Their peak was in 2020 at 4.37

Accenture display a much lower rate of employee satisfaction however have made a huge improvement over the rating period with their peak also in 2020 at 3.88 and a slight dip in 2021.

The dip during 2021 may have been impacted by the pandemic. It would be interesting to see the most recent reviews!

Interestingly, both companies had a very large decrease in 2011 and within a span of 2 years, made drastic improvements. This would lead us to believe an event of some kind occurred at this point in time. Perhaps the data sampling changed in 2011?



Yearly Change Overall Rating By Firm



		overall_rating	work_life_balance	culture_values	diversity_inclusion	career_opp	comp_benefits	senior_mgmt
firm	year							
the-LEGO-Group	2020	4.373418	4.361111	4.510490	4.050000	3.654930	4.062937	3.916084
	2021	4.297872	4.061404	4.443478	4.241071	3.547826	4.061404	3.850877
	2019	4.104651	4.128205	4.397436	0.000000	3.153846	3.740260	3.371795
	2016	4.068966	3.710526	4.381579	0.000000	3.173333	3.653333	3.581081
	2010	4.000000	4.000000	0.000000	0.000000	4.000000	2.500000	2.500000
Accenture	2020	3.885714	3.158501	3.755747	4.075188	3.968571	3.644699	3.455331
the-LEGO-Group	2014	3.882353	3.617021	4.148936	0.000000	3.085106	3.355556	3.425532
Accenture	2016	3.844221	3.100000	3.788360	0.000000	3.910995	3.636842	3.518519
	2021	3.830317	3.093093	3.702703	4.087879	3.873874	3.571856	3.385542
	2013	3.814815	2.935897	3.779221	0.000000	3.820513	3.512821	3.363636

QUESTION 3

1. Question 3

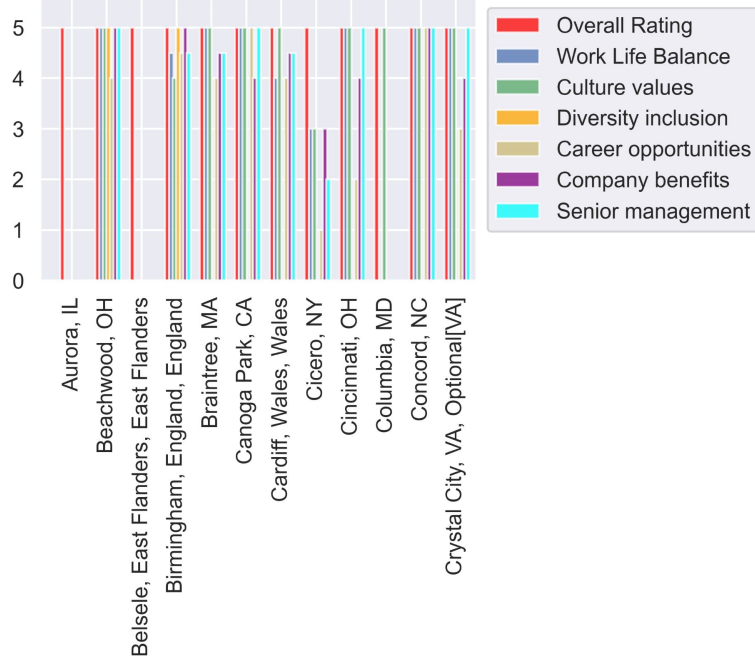
Is there a correlation between the region an employee is working in and the overall job satisfaction across companies sampled?

FINDINGS:

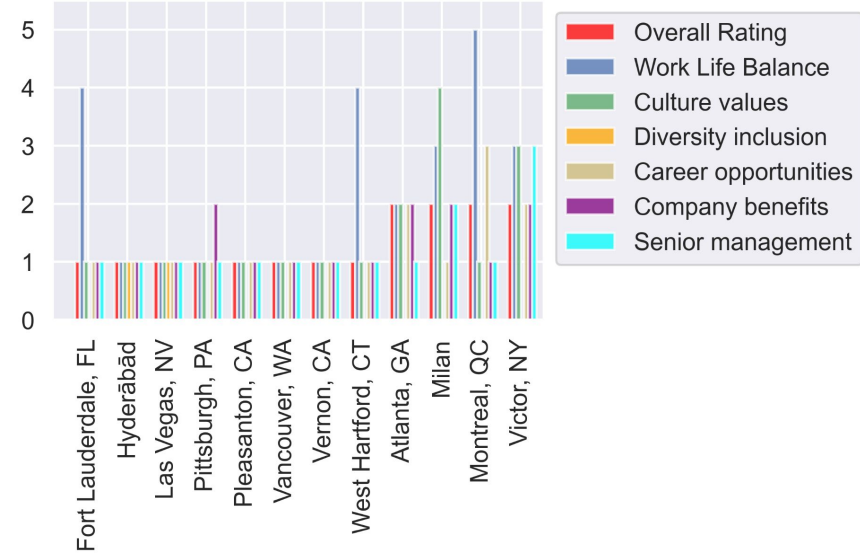
- We selected two random companies to review and compare (The-LEGO-Group and Accenture)
- We calculated the average score for each company by location, for Work Life Balance, Culture Values, Diversity Inclusion, Career Opportunities, Company Benefits and with our isolated focus being on Overall Rating.
- We also looked at Work Life Balance and Culture Values together to see their effect on overall ratings for the locations
- We took the top 10 locations and bottom 10 locations for the two firms and plotted their various metrics
- **Senior Management** is a factor in the rating of a location in the same way it is for overall job satisfaction
- Lower rated locations tend to have lower scores for Senior Management, where as the Higher rated locations have the opposite
- On analysis, surprisingly we found that Work Life Balance and Culture Values do not play a pivotal role in a locations overall rating
- In the case of Accenture, employees based overseas give a higher rating than those based in the UK
- In the case of Lego, a low overall rating indicates that there will be low ratings across a majority of metrics sampled. This is not consistent with Accenture.

Lego Locations - Best & Worst

Lego Best Locations Overall Rating v/s Work environment factor

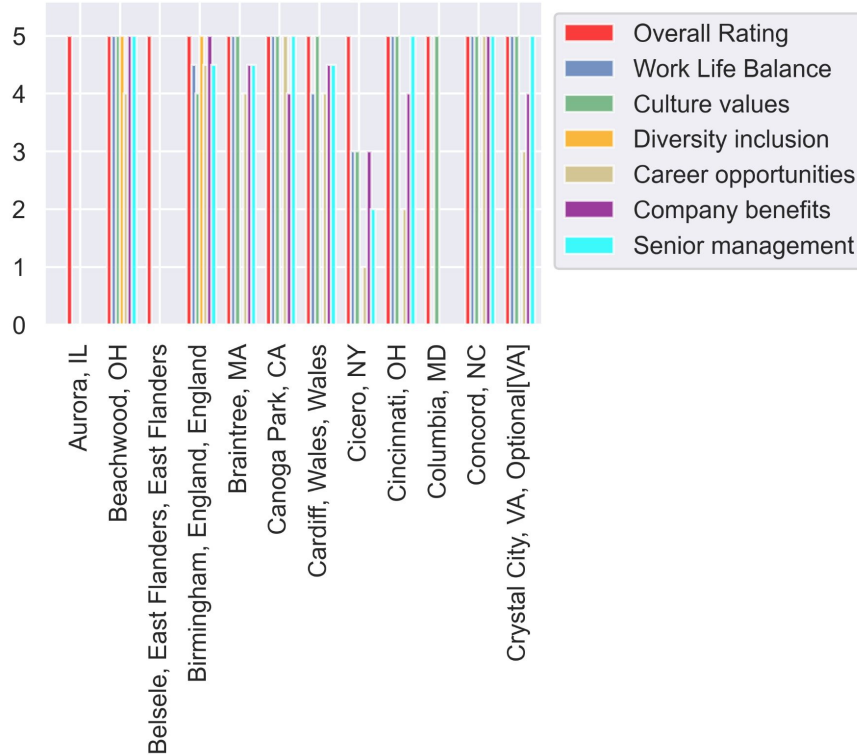


Lego Worst Locations Overall Rating v/s Work environment factor



Accenture Locations - Best & Worst

Accenture Best Locations Overall Rating v/s Work environment factor



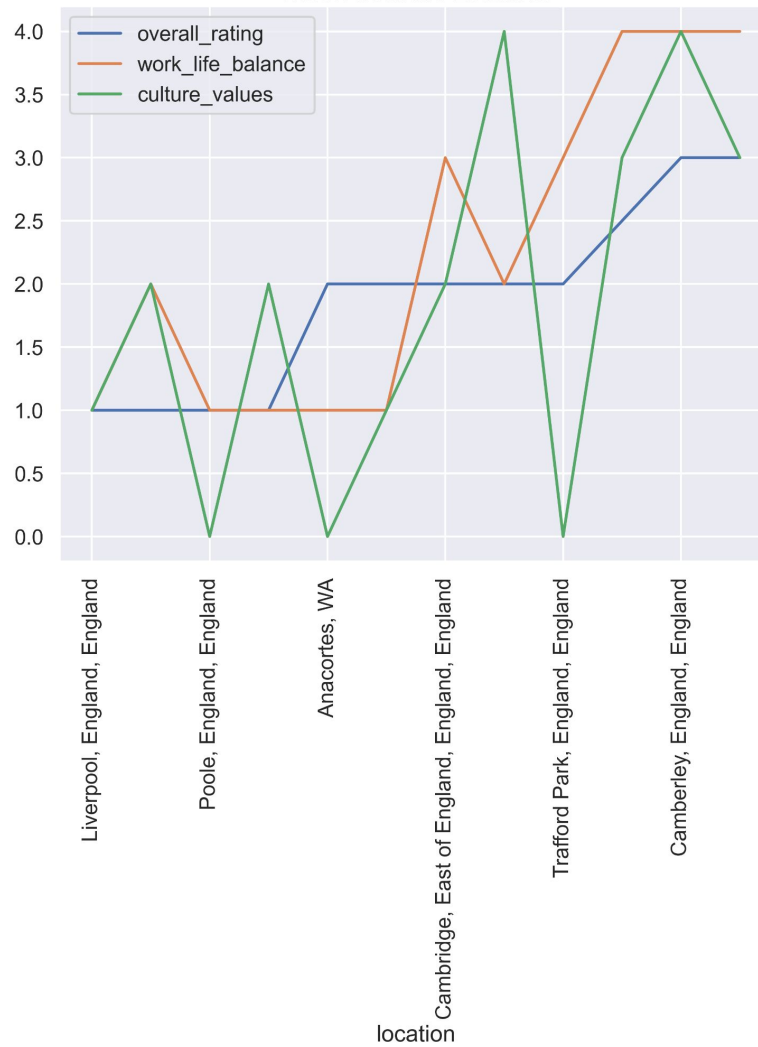
Accenture Location Overall Rating v/s Work environment factor



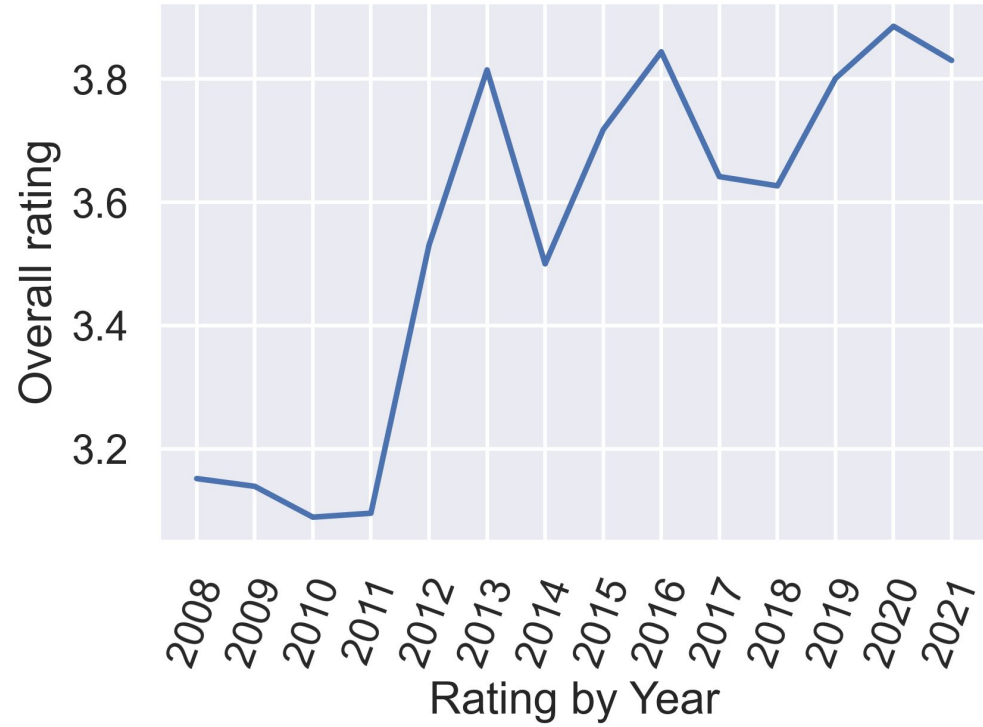
Worst Accenture Locations



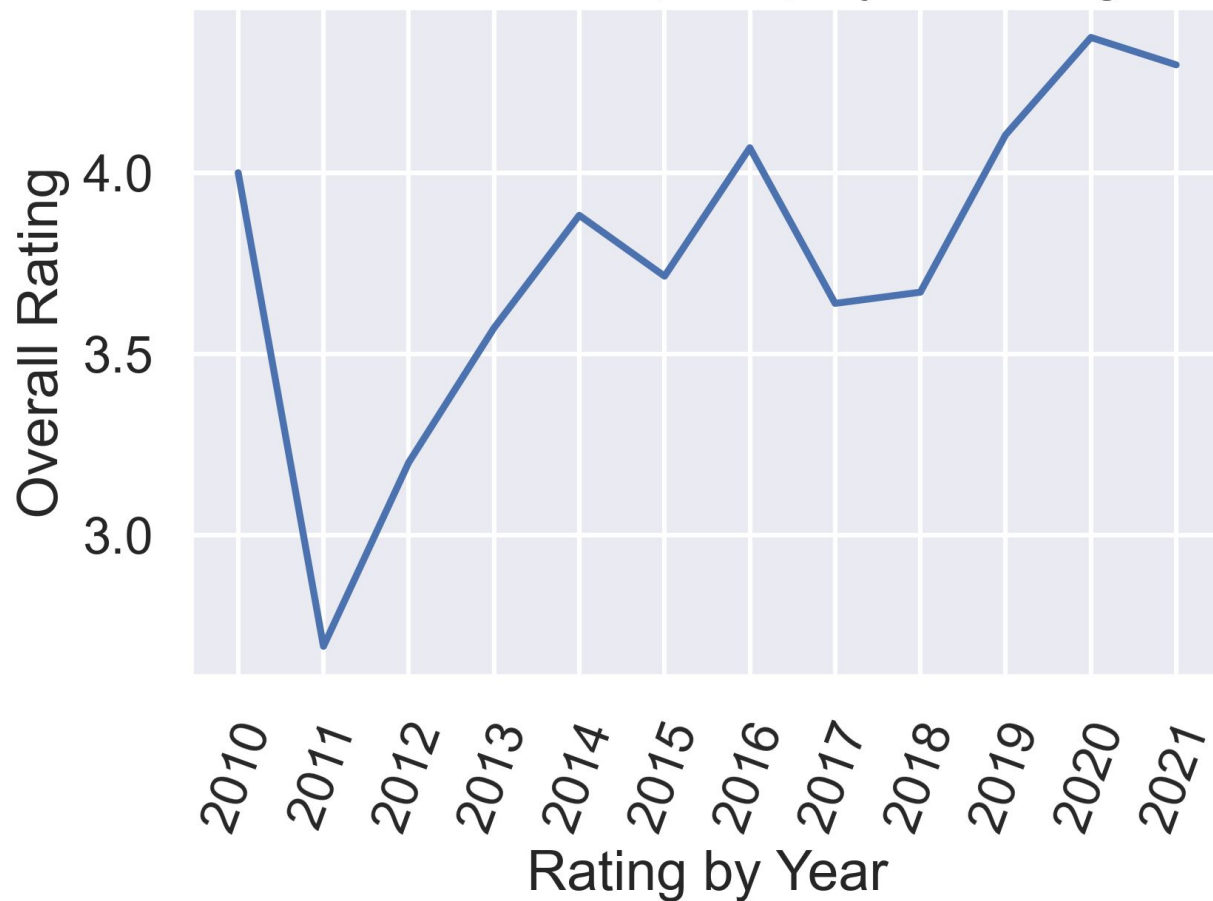
Worst Accenture Locations



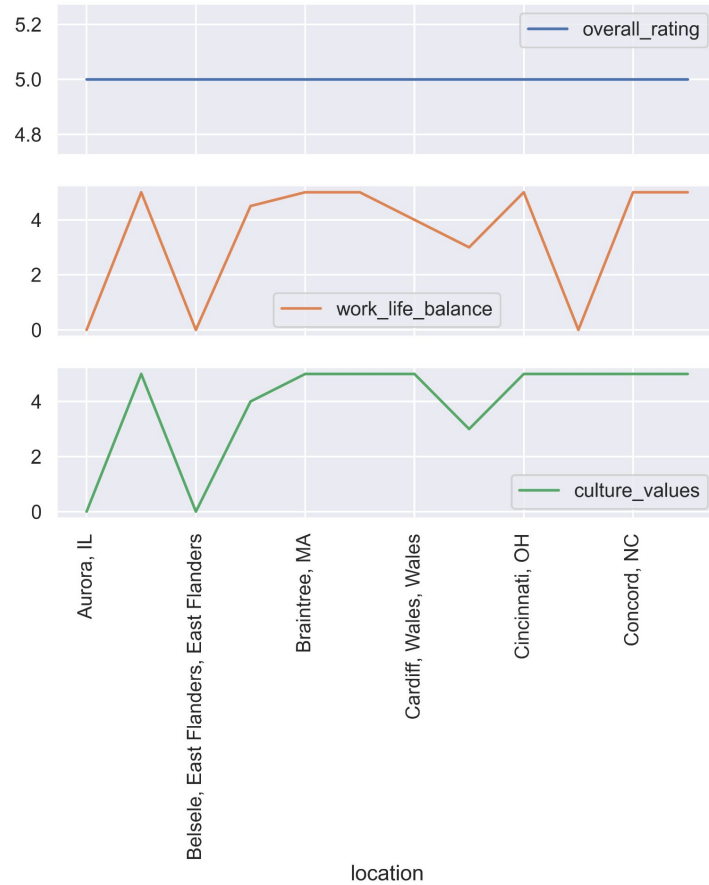
Accenture Employee Ratings

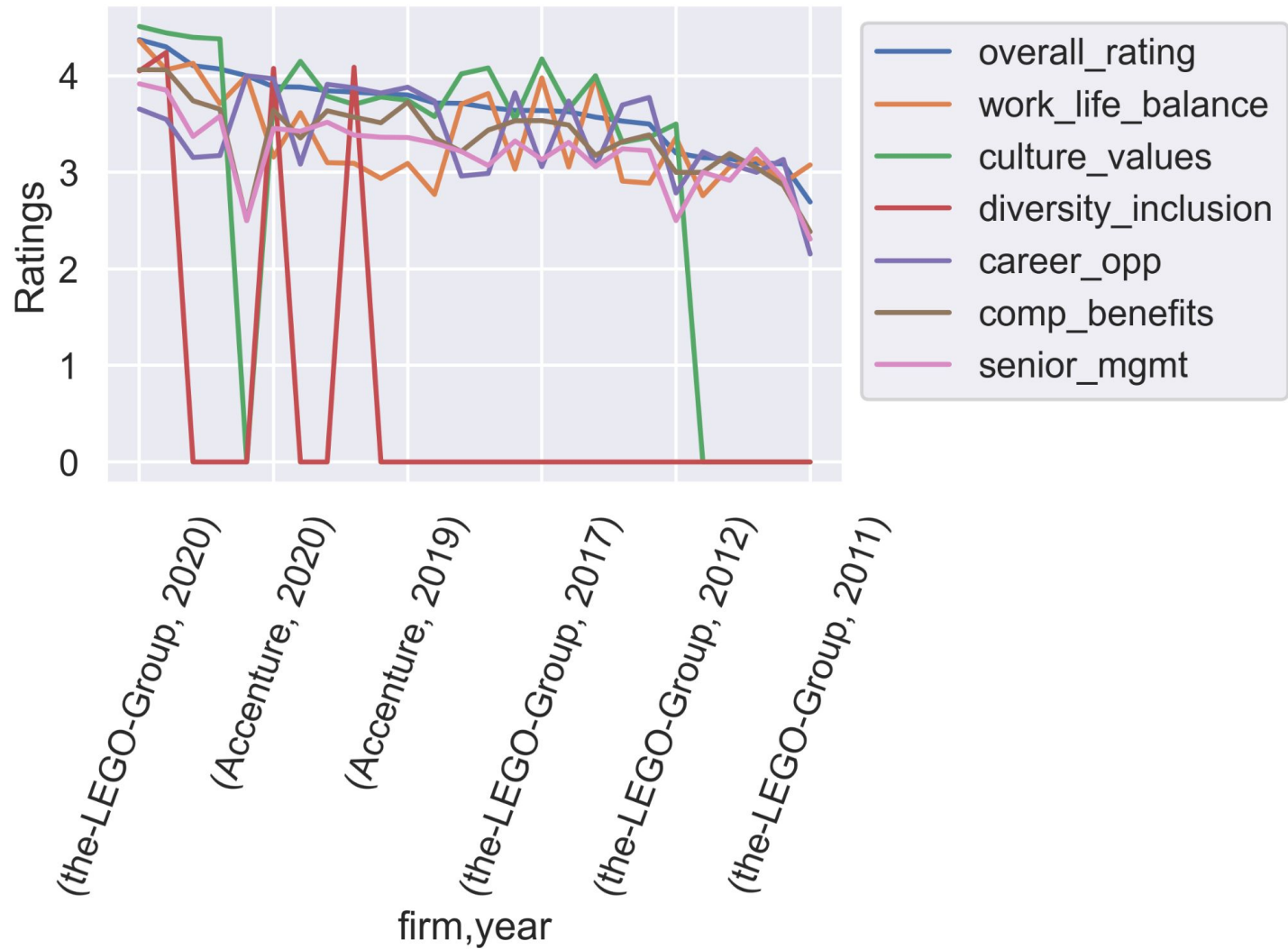


the-LEGO-Group Employee Ratings



Best Lego Locations





Bottom 5 Firms Overall Rating vs Work environment factor

