EMPLOYEE PERFORMANCE ANALYSIS

1. PROJECT SUMMARY

This project is an oversight of INX Future Inc. employee performance and factors affecting the same. This analysis focuses on employee efficiency development areas that are to be identified and provide suitable recommendations ensuring improved employee performance, thus improving the service delivery and customer satisfaction.

An algorithm of Random Forest has been implemented in this project. .

This project has been implemented in Python which yields better visualization, Tableau has been effectively utilized.

1.1 Requirement

- Employee Performance Data from INX Future Inc.
- Identifying the objectives of INX Future Inc.

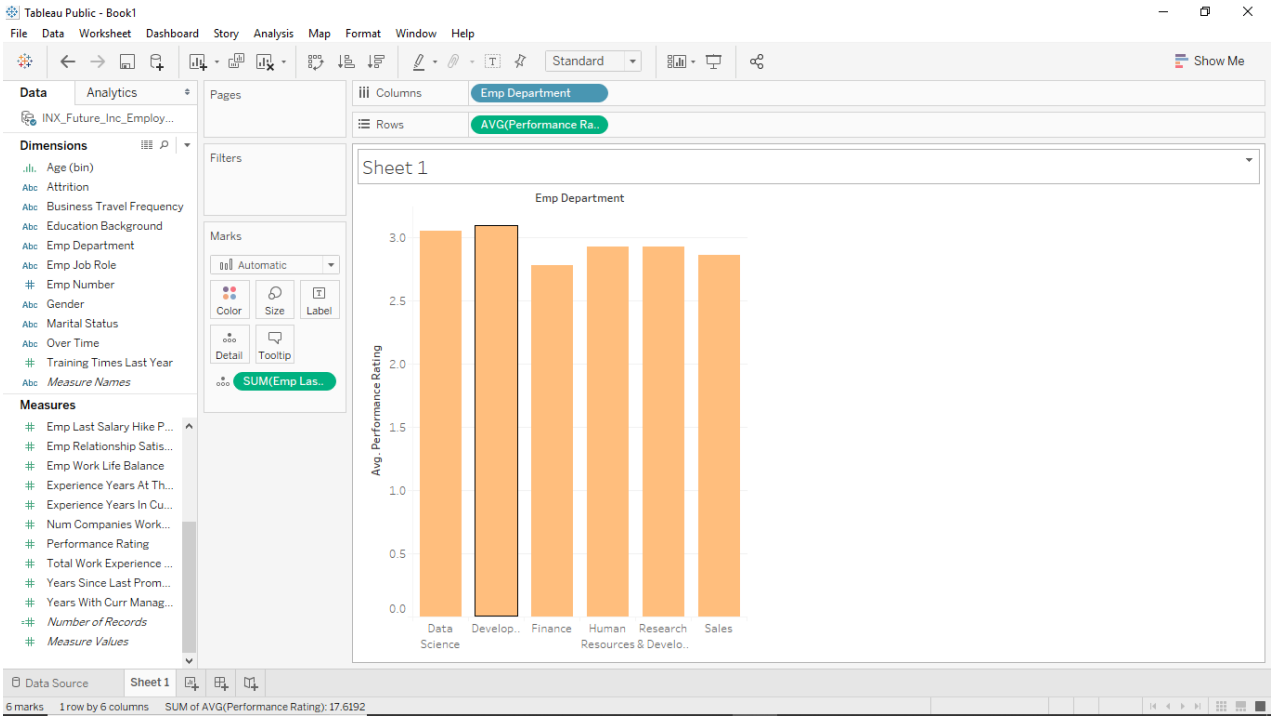
1.2 Analysis

- Random Forest Algorithm has been used to analyze the data received from INX Future Inc.
- Correlations between the predictors are analyzed.
- Feature/Predictors Importance analysis and dropping predictors.
- Every parameter has been Analyzed with respect to Performance Rating.

Department Wise Performances:

- From the insight into the data, below are the Department-Wise employee performances.

Employee Department	Count of Employees Based on Performance Rating					
	Good (2)	Excellent (3)	Outstanding (4)	Grand Total	% of 3 Ratings	% of 4 Ratings
Data Science	1	17	2	20	85	10
Development	13	304	44	361	84.21052632	12.18836565
Finance	15	30	4	49	61.2244898	8.163265306
Human Resources	10	38	6	54	70.37037037	11.11111111
Research & Development	68	234	41	343	68.22157434	11.95335277
Sales	87	251	35	373	67.2922252	9.383378016
Grand Total	194	874	132	1200		



- From the above data and analysis, it is evident that Development, Human resources and Research & Development are the top employee performing Departments.
- Even though, the Department of Data science has a high percentage of 3 ratings, its percentage of 4 ratings are comparatively, barring it from top 3 Performing Departments.

- **Top 3 Important Factors Affecting Employee Performance:**

a. EmpLastSalaryHikePercent

✓ Employee having at least 20% of salary hike have performed "Excellent"/"Outstanding" performance.

b. Emp Work Life Balance

- ✓ Employee having better work Life Balance implies that Employee Performance Rating Increased or else we can say from visualization that Employee Work Life Balance is directly proportional to Performance Rating of an Employee from “Good” to “Excellent” as observed.

c. <u>Experience Years In Current Role</u>

- ✓ From Visualization it has been observed that Employee having Zero years of Experience having Good Performance Rating and after that it’s directly proportional to the Performance Rating as Observed(Increase in Experience Years In Current Role will Increase the Performance Rating of an Employee).

Random Forest trained Model is an efficient model to predict the employee performance based on the factors as inputs and the same can be used to hire the employees.

The percentage of trained model efficiency resulted as 93.75% and helping to identify if the employee is being hired will be a “Good”, “Excellent” or “Outstanding” performer.

Recommendations:

a. Employees in all Departments must be given an adequate Salary hike. Good Salary hike can help in increasing Employee Performance.

b. The better the Employee Work Life Balance better the Performance rating of the employees.

c. Promotions are required for employee in a Department for better performance.

d. The Department of Data Science and Finance can hire more employees with relevant education background.

2.1 Visualization

1. Department wise performances

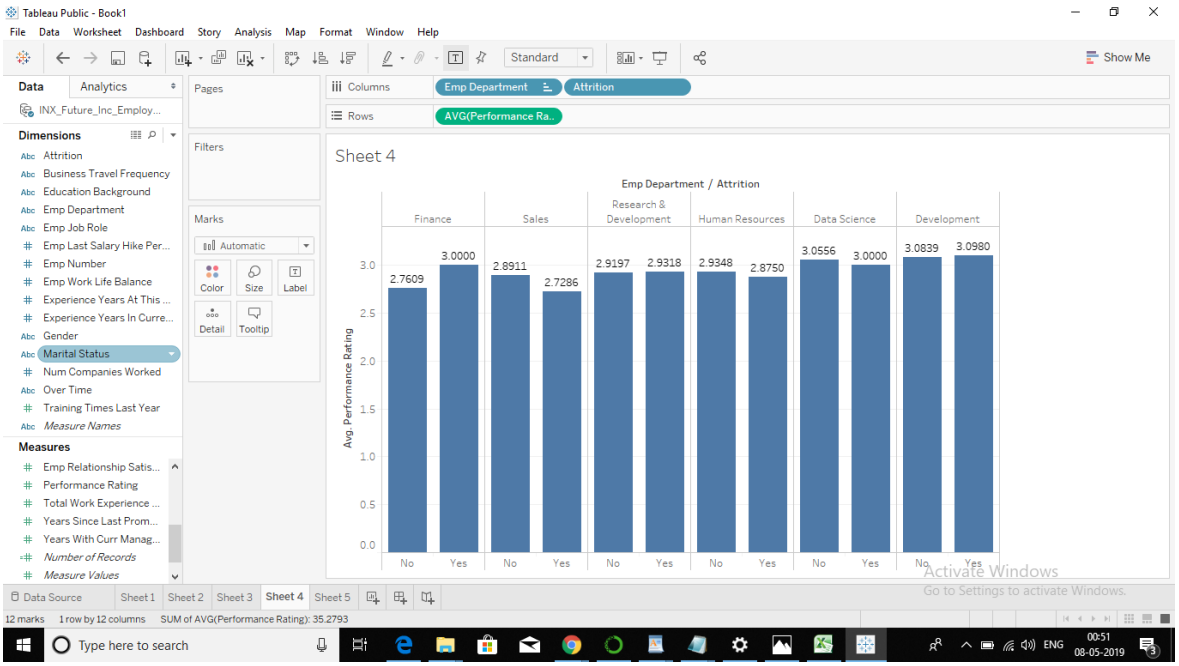


Fig. Graph showing: Department-wise Performance Rating

2.2 Top 3 Important Factors Effecting Employee Performance

1.EmpLastSalaryHikePercent:

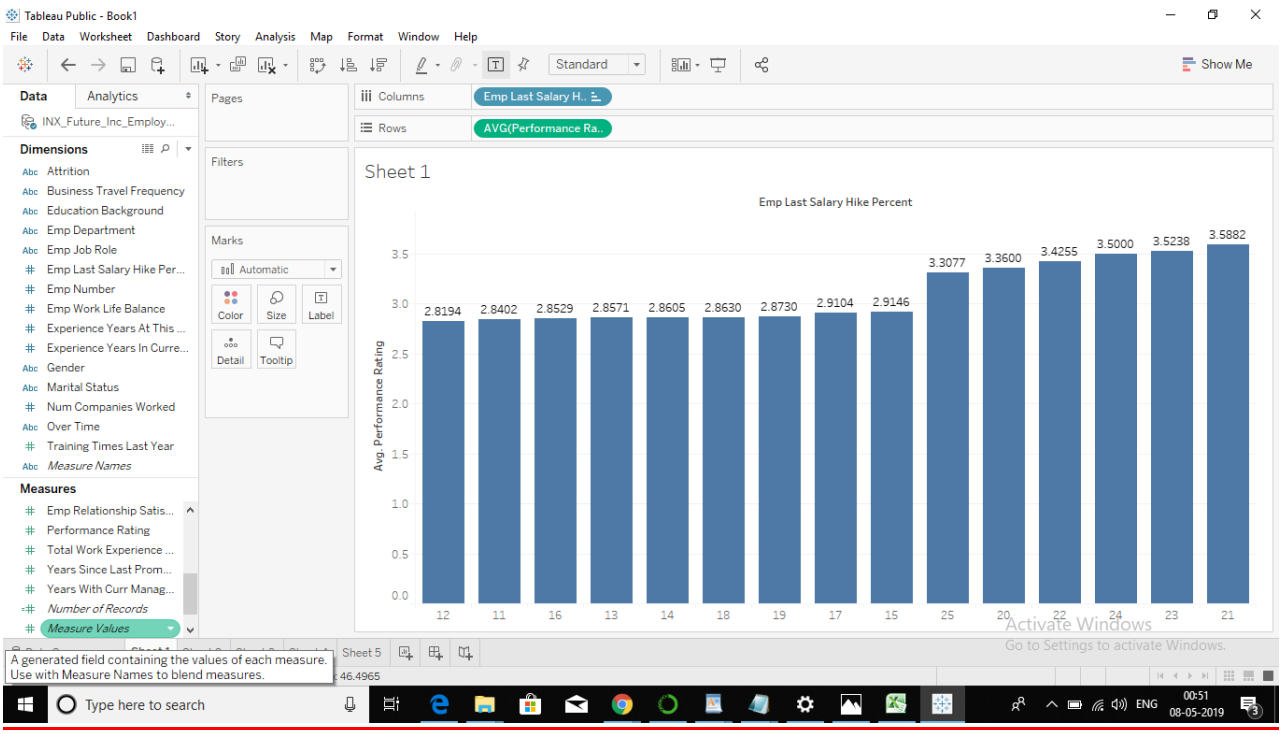


Fig.Graphshowing:EmpLastSalaryHikePercentv/sAvgperformanceRating

2.**EmpWorkLifeBalance:**

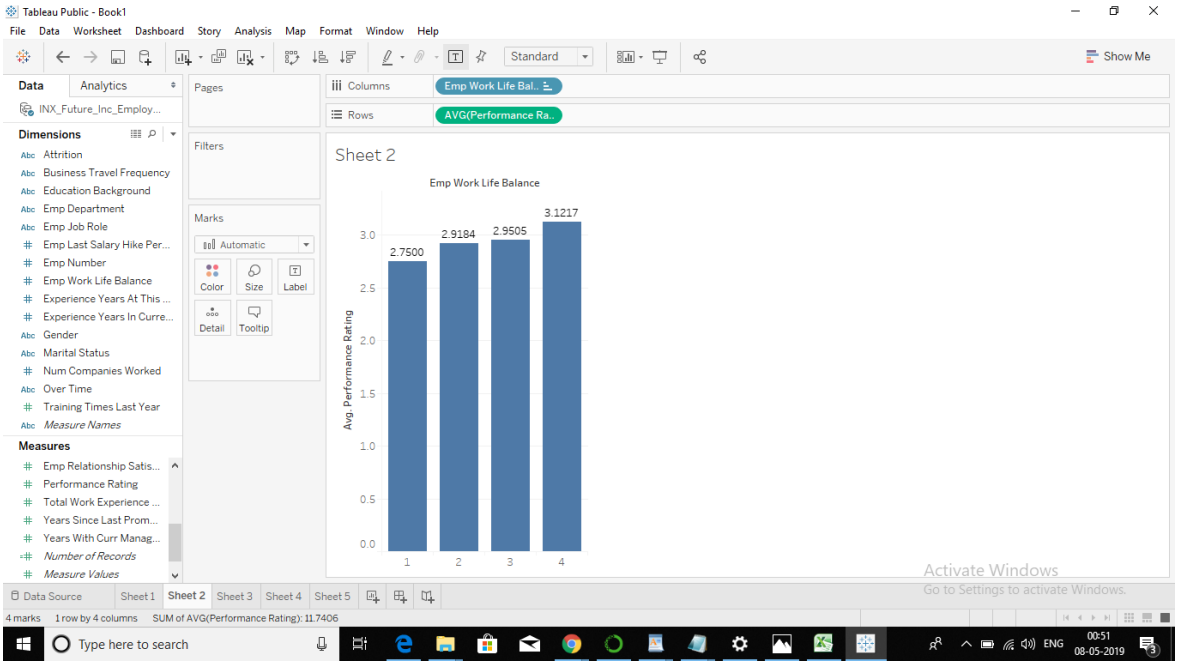


Fig. Graph showing .**EmpWorkLifeBalance** v/s Avg performance Rating

3.**ExperienceYearsInCurrentRole:**

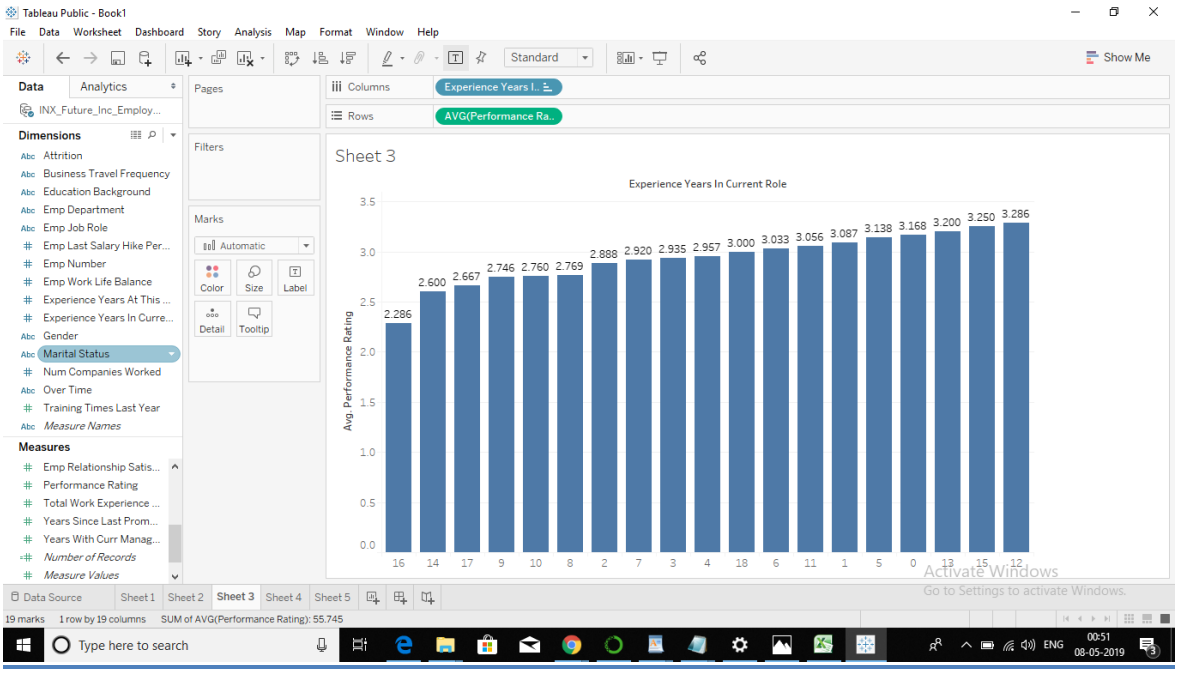


Fig. Graph showing: **ExperienceYearsInCurrentRole**v/s Avg performance Rating

3.4 References

Not available/Applicable.