

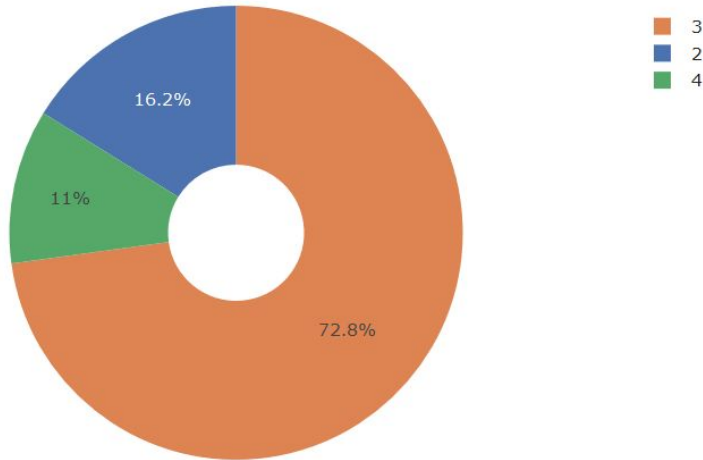
Employee Performance

Gaurav Kumar

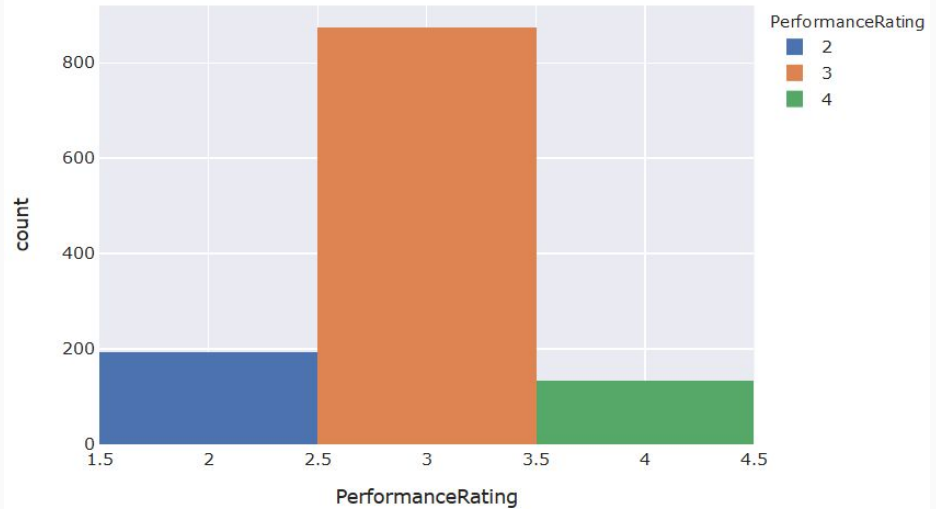
Employee Performance

Data Distribution

Performance Rating Distribution



Number of data observations



Most of the people goes with mean rating of 3

Dataset is small with only 1200 rows, thus it becomes important to study categorical features statistically

Employee Performance

Summary of suggestions *[Refer next slides for explanations]*

Not holding Current
Position for longer time

Change of Manager after
5-6 years

There is something positive
to learn from development
dept where most of the
developers work

Work on Environment
Satisfaction improvement

Reduce Overtime

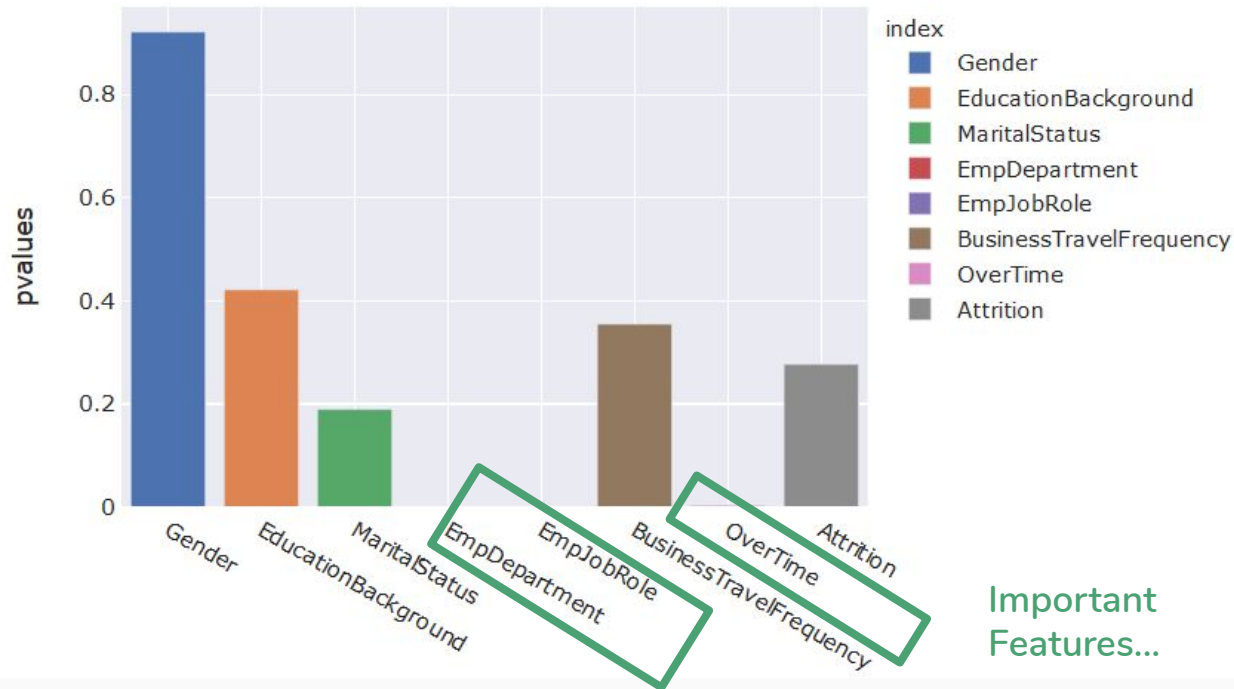
Work from home to cater
long distance employee /
Another office space to
cater to left out portion of
city

Important Categorical Features

Employee Performance

Influencing factors using chi-squared test for relationship

chi squared test for correlation



Low Statistical
P Values

High Possibility
Of Correlation

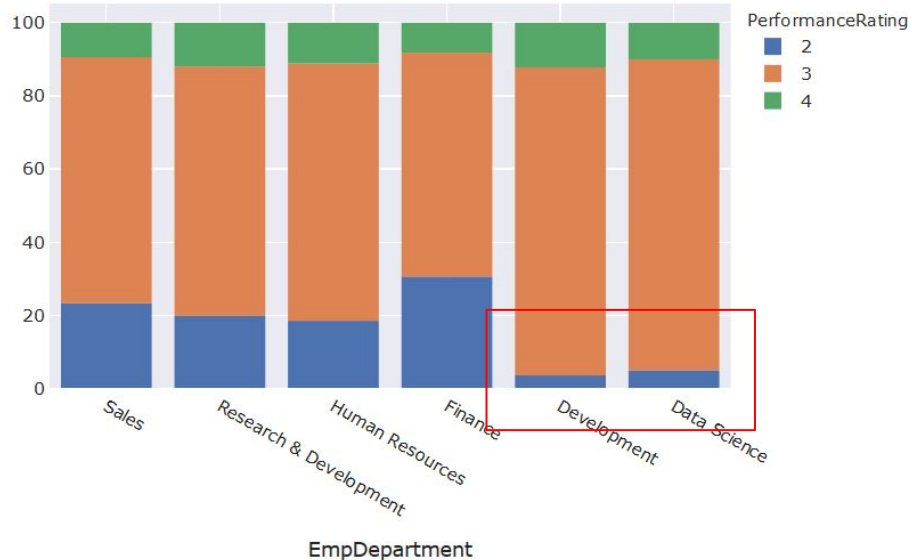
	pvalues
Gender	0.921756
EducationBackground	0.421633
MaritalStatus	0.18941
EmpDepartment	3.83208e-11
EmpJobRole	1.31106e-07
BusinessTravelFrequency	0.354903
OverTime	0.00354852
Attrition	0.277053

Employee Performance

What's Going on with respect to [Different Departments]

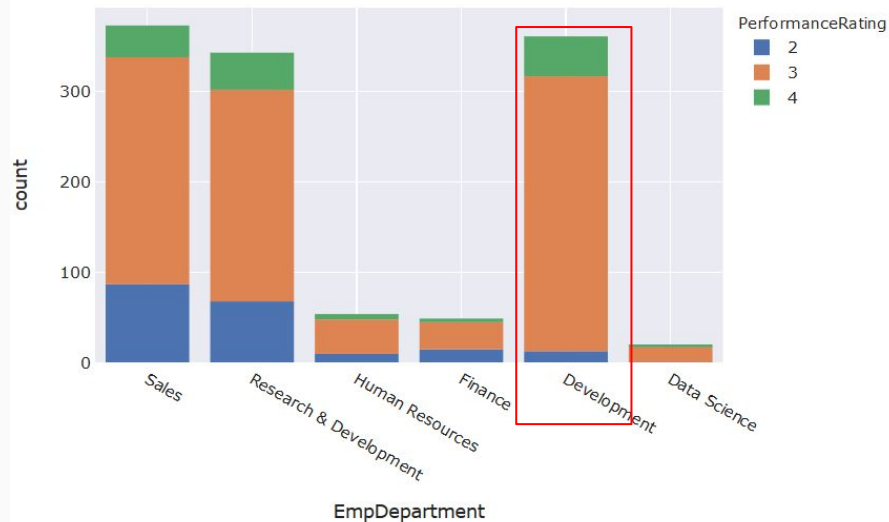
Percentages

Relationship with EmpDepartment



Count

Relationship with EmpDepartment



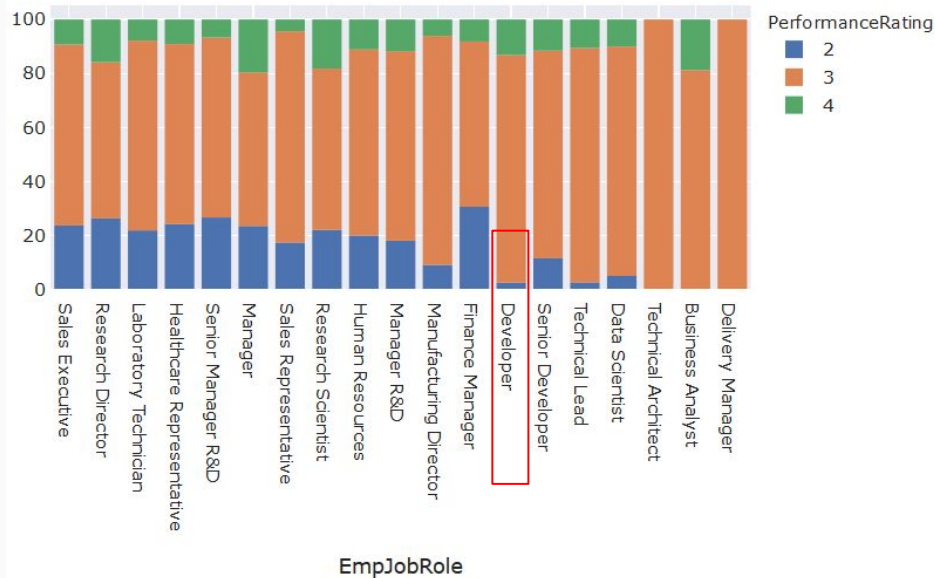
Departments Like 'Development' and 'Data-Science' are doing well
Since Number of samples in Development is High , its significance is high

Employee Performance

What's Going on with respect to [Different Job Roles]

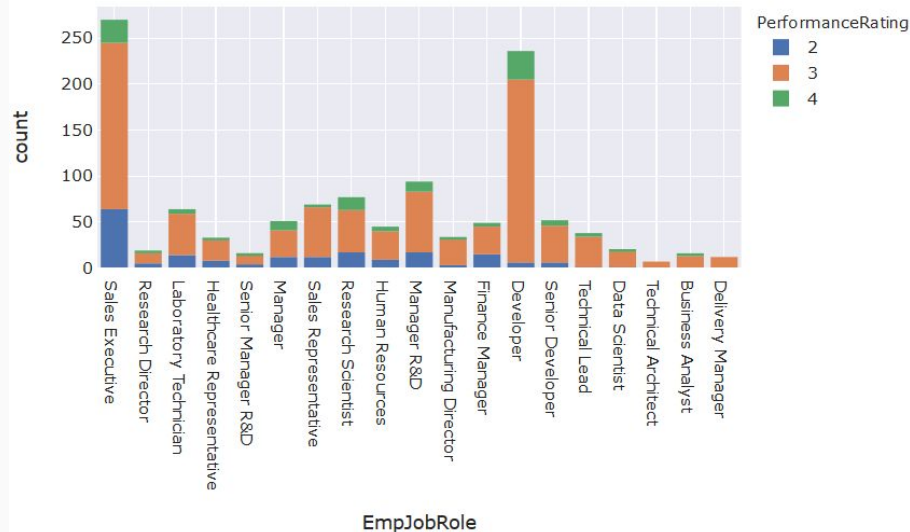
Percentages

Relationship with EmpJobRole



Count

Relationship with EmpJobRole



Job Roles Like Developer are performing **better** than rest

Employee Performance

What's Going on with respect to [Different Job Roles & Department]

EmpJobRole	Business Analyst	Data Scientist	Delivery Manager	Developer	Finance Manager	Healthcare Representative	Human Resources	Laboratory Technician	Manager	Manager R&D	Manufacturing Director	Research Director	Research Scientist
EmpDepartment													
Data Science	0	20	0	0	0	0	0	0	0	0	0	0	0
Development	16	0	12	236	0	0	0	0	0	0	0	0	0
Finance	0	0	0	0	49	0	0	0	0	0	0	0	0
Human Resources	0	0	0	0	0	0	45	0	9	0	0	0	0
Research & Development	0	0	0	0	0	33	0	64	8	94	33	19	
Sales	0	0	0	0	0	0	0	0	34	0	0	0	

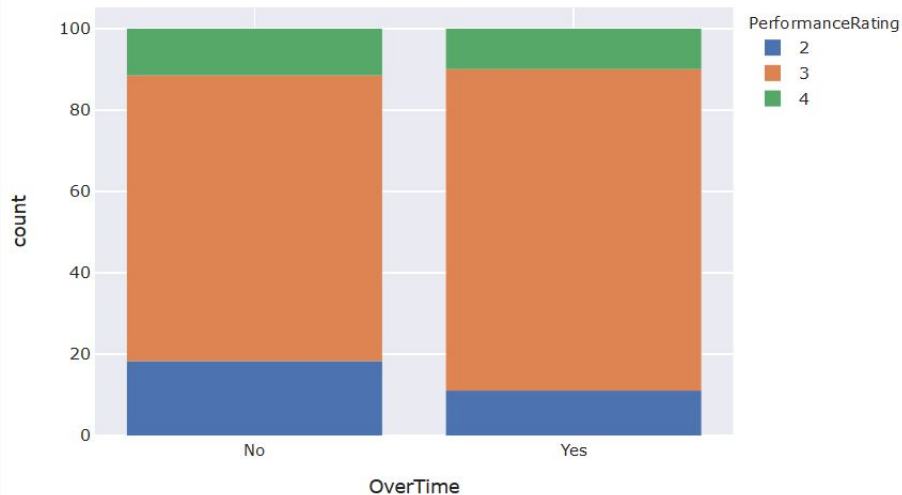
Almost all Developers work in Development, and both these attribute had good sign for Rating *[Last two slides]*

Employee Performance

What's Going on with respect to [Overtime]

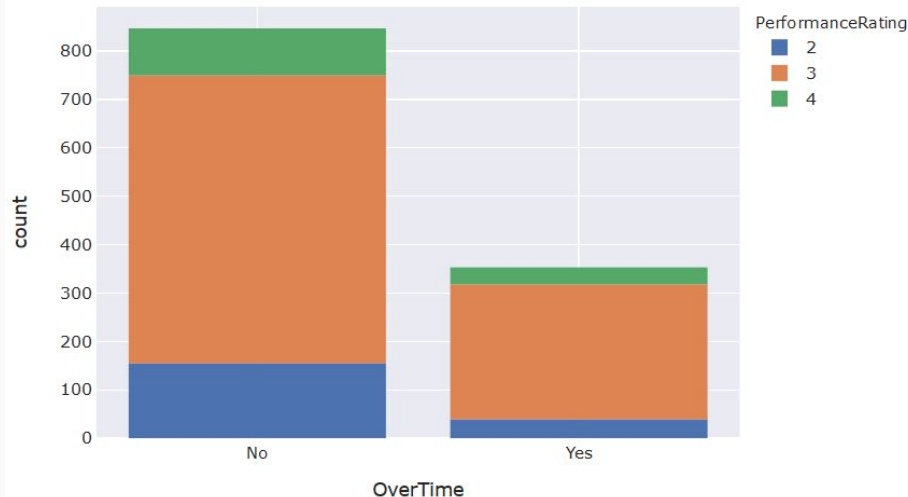
Percentages

Relationship with OverTime



Count

Relationship with OverTime



Overtime is actually **not** turning out to be good

Important Numerical Features

Employee Performance

Influencing factors using correlation coeff. for relationship



Correlation coeff..

-1

Important
Features...

0

Not so
Important
Features...

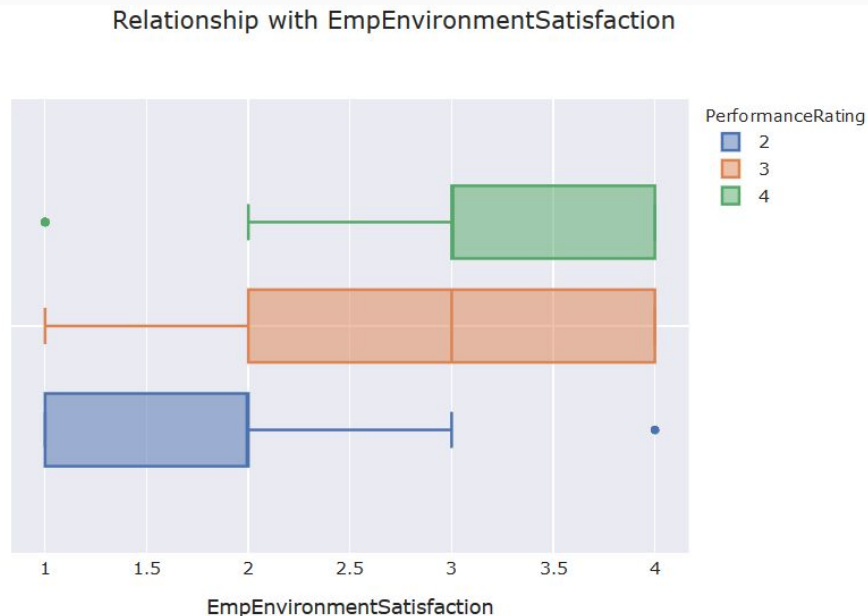
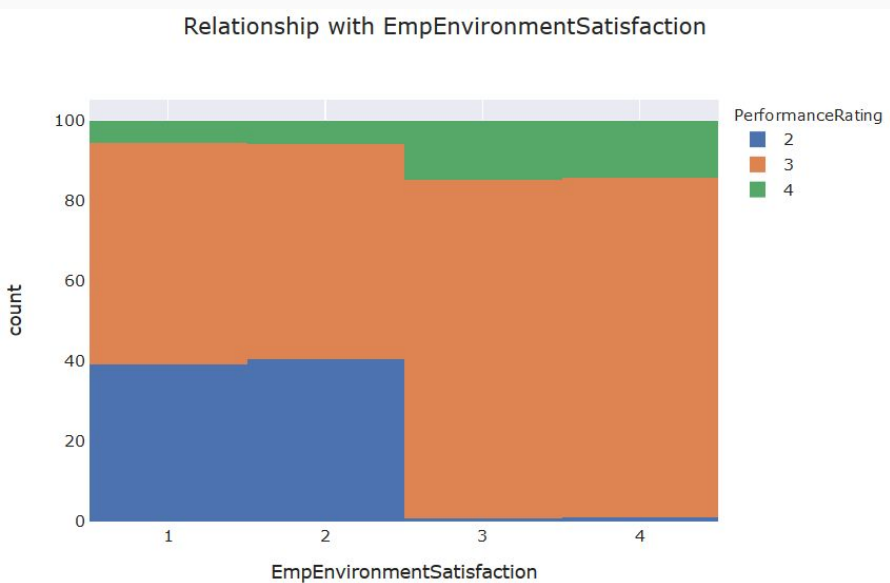
+1

Important
Features...

Employee Performance

What's Going on with respect to [Emp Environmental Satisfaction]

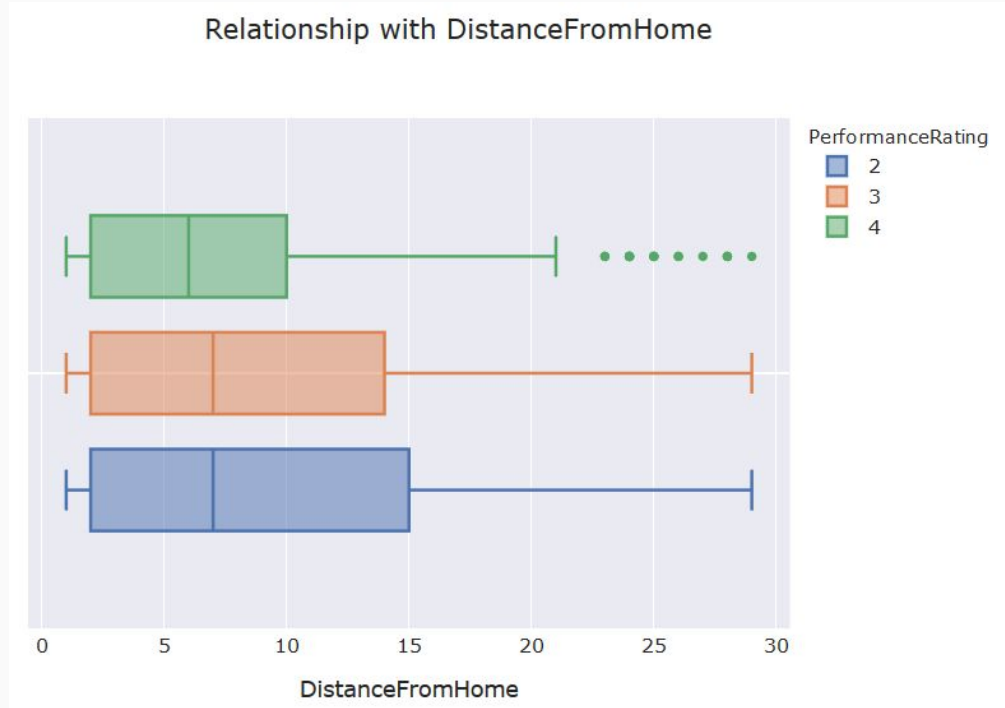
Percentages



Environment Satisfaction is positively leading to the **better** Performance Ratings

Employee Performance

What's Going on with respect to [Dist from office]



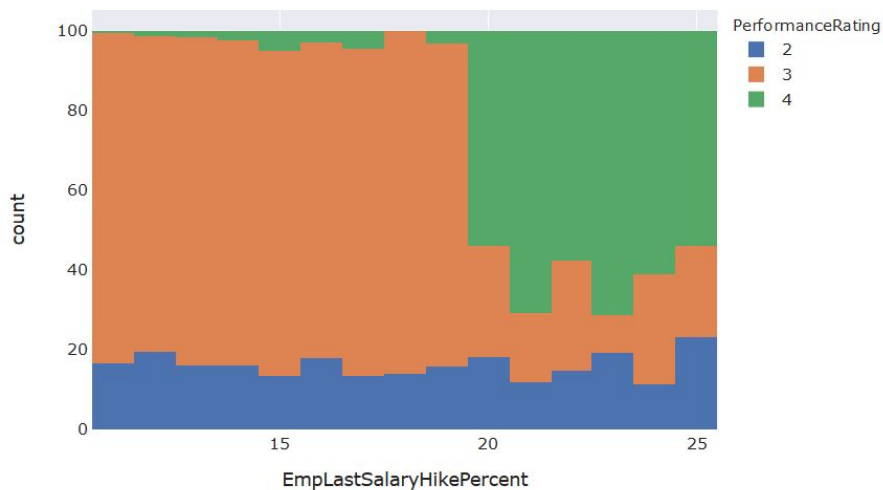
Large Distances from office has higher percentages of **poor** Ratings

Employee Performance

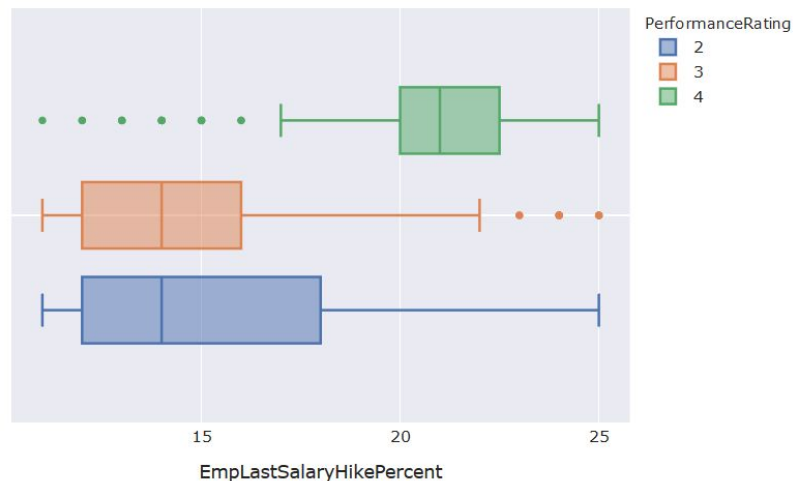
What's Going on with respect to [Hike]

Percentages

Relationship with EmpLastSalaryHikePercent



Relationship with EmpLastSalaryHikePercent



Good Hike has given good Rating, but it may not be possible to give hike to all

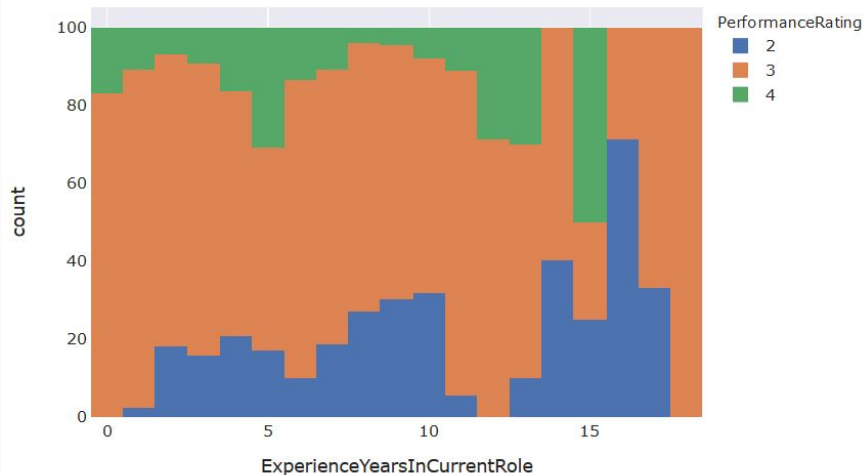
Employee Performance

What's Going on with respect to [Exp Current Role]

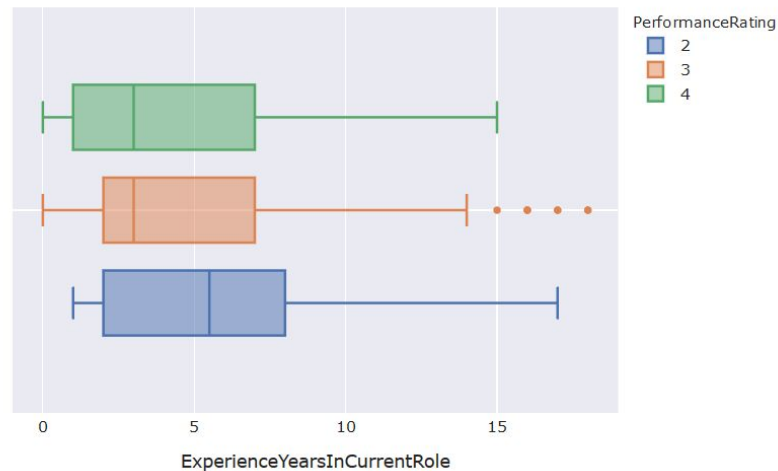
Percentages

Count

Relationship with ExperienceYearsInCurrentRole



Relationship with ExperienceYearsInCurrentRole



Holding on to a position for longer years is **not** turning out be good

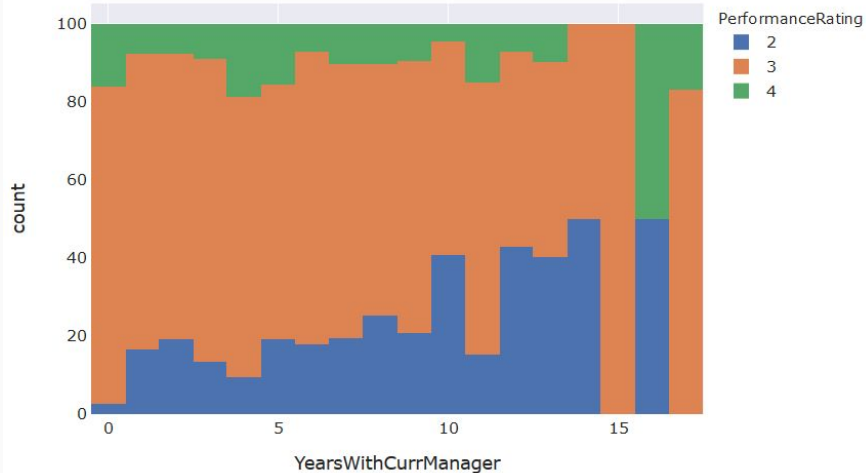
Employee Performance

What's Going on with respect to [Exp with current manager]

Percentages

Count

Relationship with YearsWithCurrManager



Relationship with YearsWithCurrManager



Holding on to one manager for longer years is **not** turning out be good

Employee Performance

Inter-correlated Factors



Correlation coeff..

EmpJobLevel	TotalWorkExperienceInYears	0.784229
ExperienceYearsAtThisCompany	ExperienceYearsInCurrentRole	0.764102
ExperienceYearsAtThisCompany	YearsWithCurrManager	0.759258
ExperienceYearsInCurrentRole	YearsWithCurrManager	0.728973
Age	TotalWorkExperienceInYears	0.680886
TotalWorkExperienceInYears	ExperienceYearsAtThisCompany	0.633555
ExperienceYearsAtThisCompany	YearsSinceLastPromotion	0.620230

Confounding Variable:
Longevity

Experience, Job level, Age, Years with current manager are all correlated to each other which is also obvious all these are thus having similar relationship with Performance Ratings