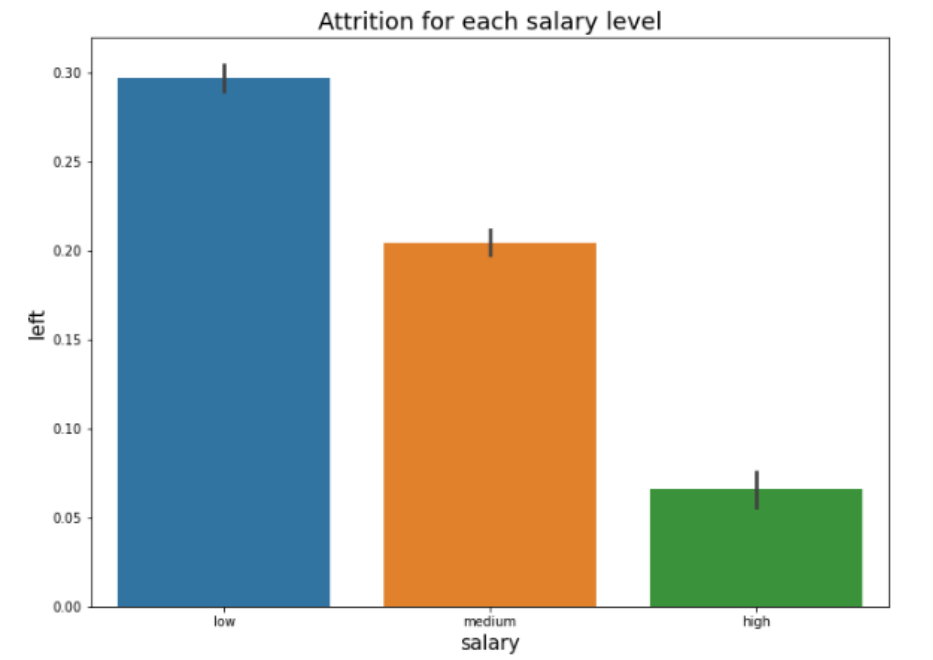
JULY 12, 2020

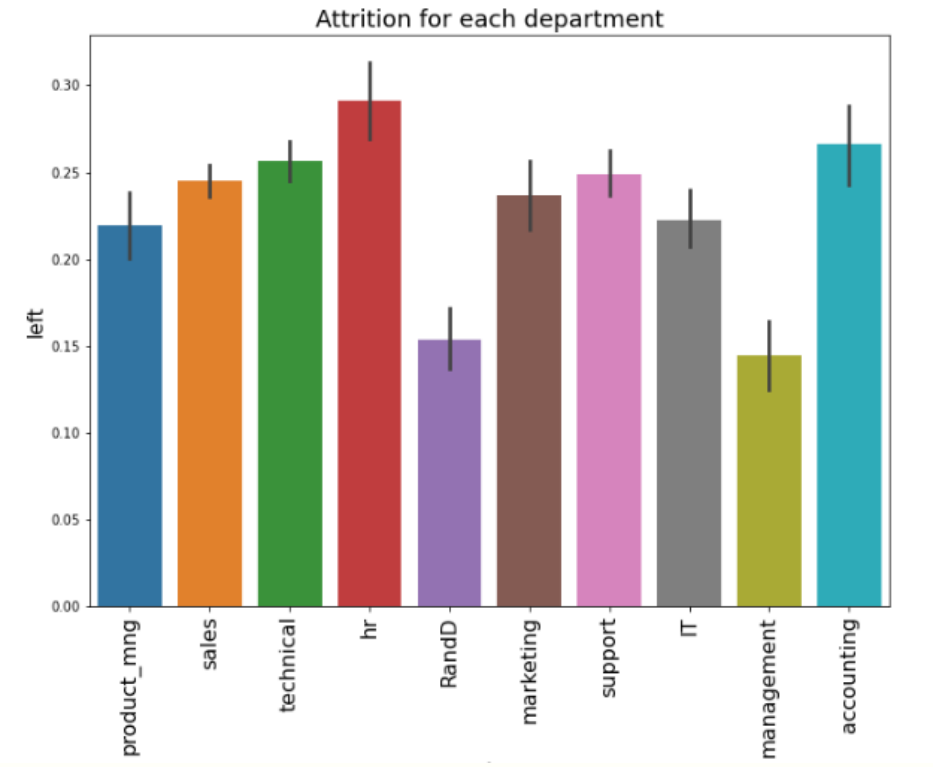
ATTRITION ANALYSIS

Inferences and predictions from data

I. Problem analysis from charts

1. *Attrition for salary levels and departments*



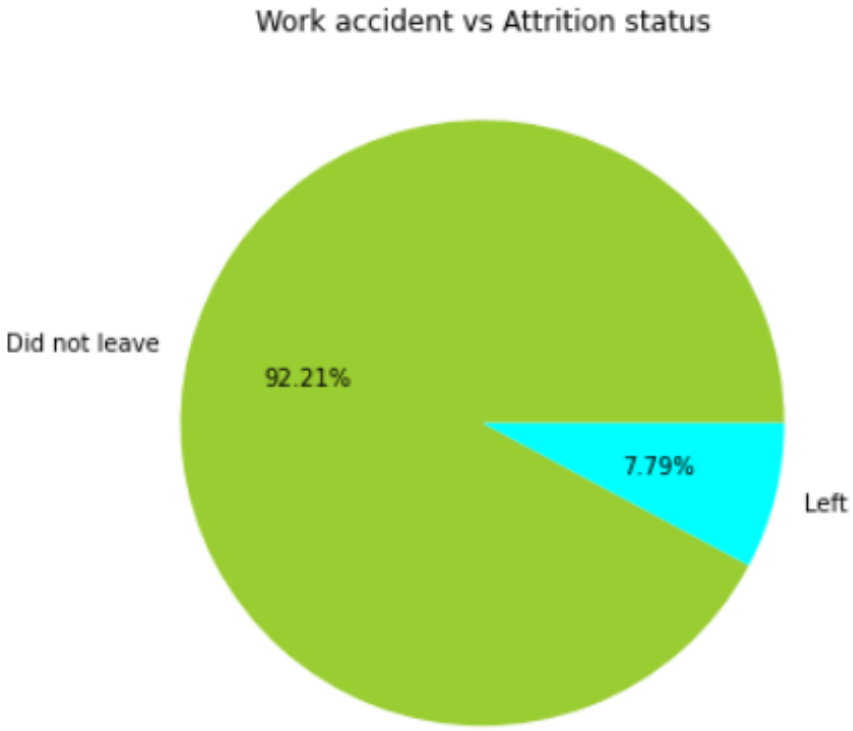


THINGS TO BE DISCUSSED

The two graphs clearly tell us the following:

- Lesser salary levels & HR and accounting department have shown the highest attrition
- R&D and management shows the least attrition

2. Attrition in employees with work-related accidents



1. Work related accidents have not had any impact on the employees leaving the organization.
2. The percentage of workers who did not meet an accident and left is ~20% more than the ones who met an accident

II. Reason for high attrition in the best employees

WHO ARE HIGH PERFORMERS?

WE HAVE CONSIDERED THE EMPLOYEES WHO HAVE SCORED ABOVE 80 PERCENTILE IN THE LAST EVALUATION AS HIGH PERFORMERS

AVG HOURS/MONTHS

17.84 hours more

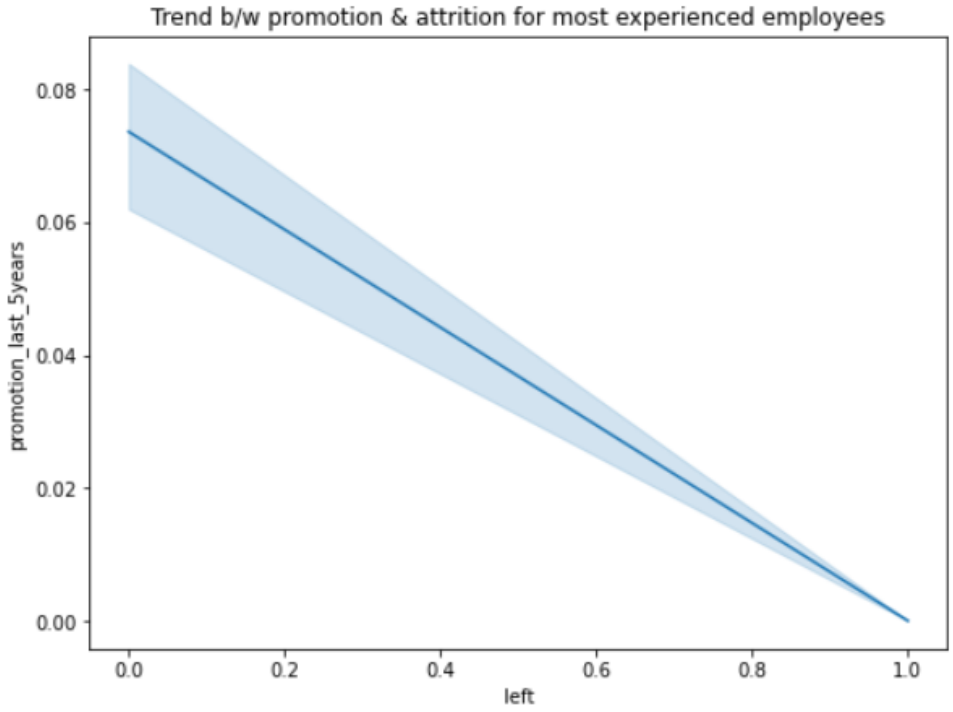
THAN THE COMPANY AVERAGE

0.24%

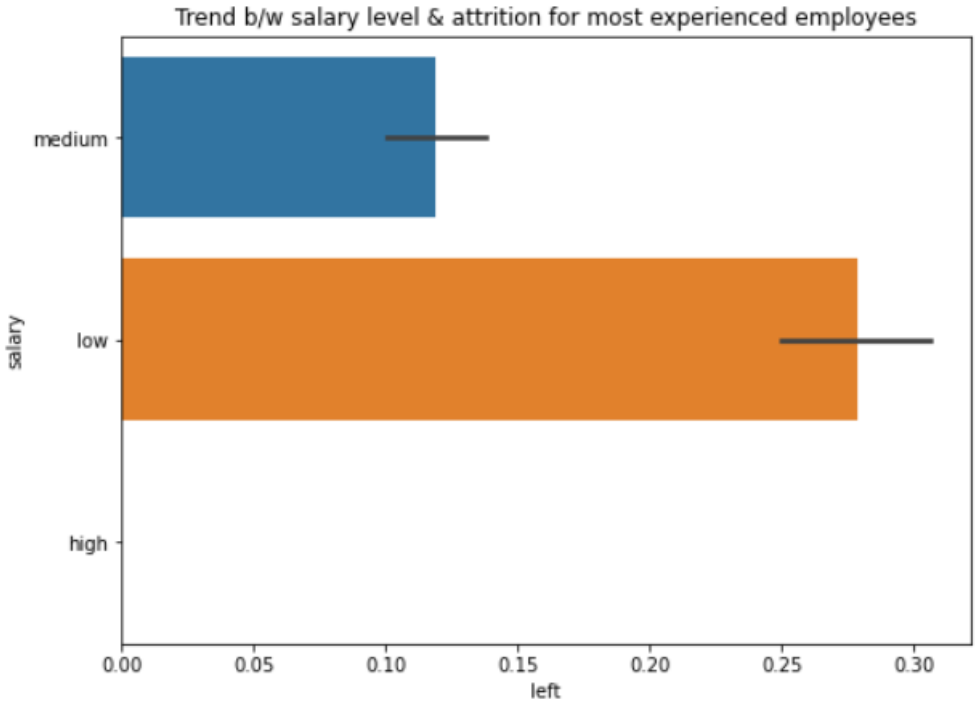
less Promotion than the low performers

THEY ARE WORKING MORE & GETTING PROMOTED LESS

III. Reason for high attrition among experienced employees



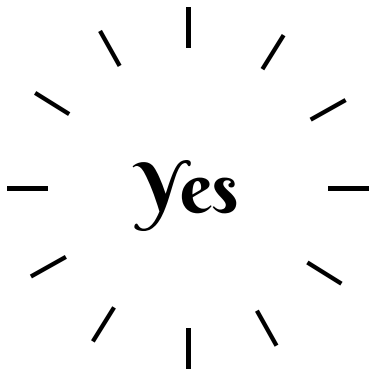
1. Lesser the promotion, higher the attrition
2. As the promotion in 5 years has fallen, attrition has increased



1. Senior employees with a lower to medium salary grade have shown attrition
2. This is probably due to the pay disparity and their desire for growth based on their experience

EXPERIENCED EMPLOYEES ARE PERHAPS NOT GETTING THE GROWTH THEY ARE EXPECTING

IV. Can we predict when an employee is about to leave ?



We trained models on the training data and validated them on the test data

THE RESULTS HAVE BEEN VERY ENCOURAGING

THE BEST MODEL WE HAVE IDENTIFIED IS A RANDOM FOREST, WHICH IS AN ENSEMBLE OF DECISION TREES

MODEL METRICS

Accuracy score?	99.2%
How precise it is?	99.9%
How fit the model is?	99.6%
How correctly it identifies the True positives?	99.3%

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Python notebook attached