



# Predicting the Attrition of High Performing IBM Employees

During the “Great Reshuffle” what can we say about who is choosing to leave?





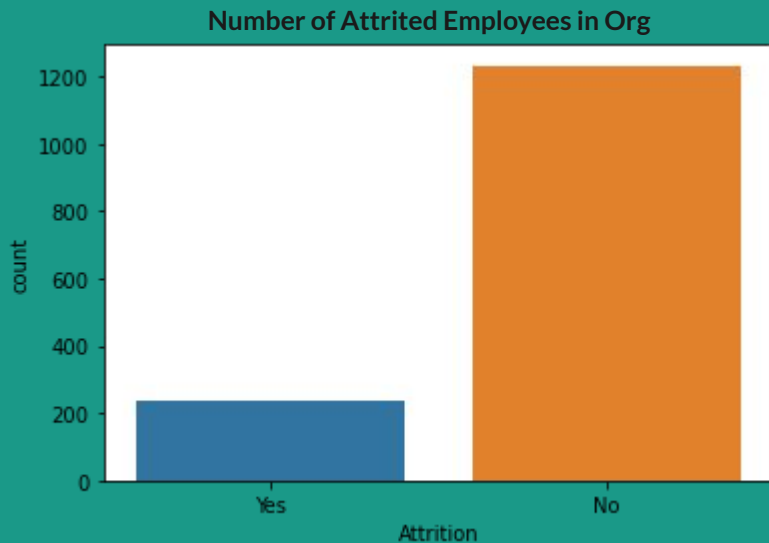
# Intro

What are we trying to do and why does it matter?

- Data: IBM HR Attrition Data
  - 34 Total Features with Employee Listening, Demographic, and Job Information
- Goal:
  - To understand what groups of employees are most at risk for attrition in order to manage largest cost to a business: it's people
- Application:
  - Creation of targeted retention programming for most at risk groups

# 19.2% of org has **left** the company FYTD

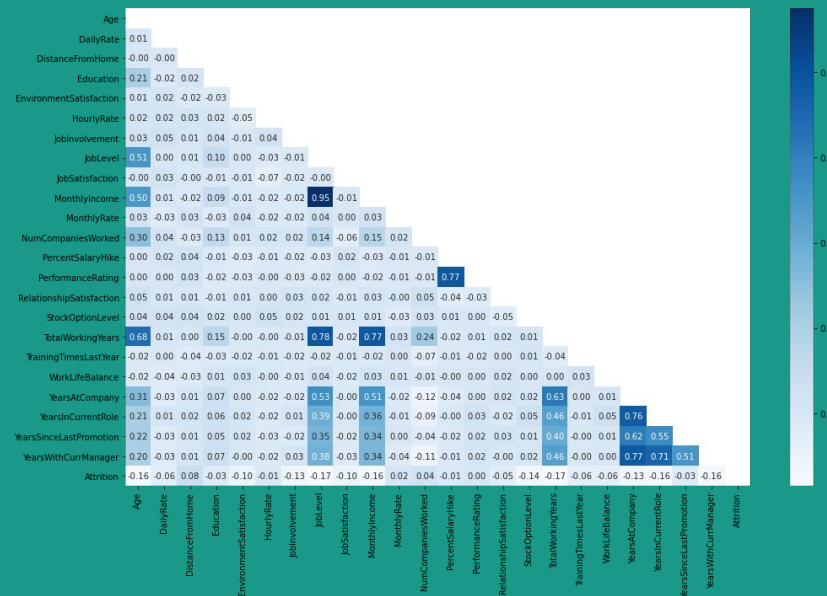
We know the Industry standard for healthy attrition is 10%. What's going on?



# Features

What attributes did we consider?

- Age
- Department (Dummy)
- Business Travel (Dummy)
- Distance From Home
- Education (Dummy)
- Environment Satisfaction
- Gender (Dummy)
- Hourly Rate
- Job Involvement
- Job Level
- Job Role (Dummy)
- Job Satisfaction
- Marital Status (Dummy)
- Monthly Income
- Number of Companies Worked
- OverTime (Dummy)
- Percent Salary Hike
- Performance Rating
- Relationship Satisfaction
- Standard Hours
- Stock Option Level
- Training Times Last Year
- Work Life Balance Satisfaction
- Tenure at Company
- Years in Current Role
- Years Since Last Promo
- Years with Current Manager



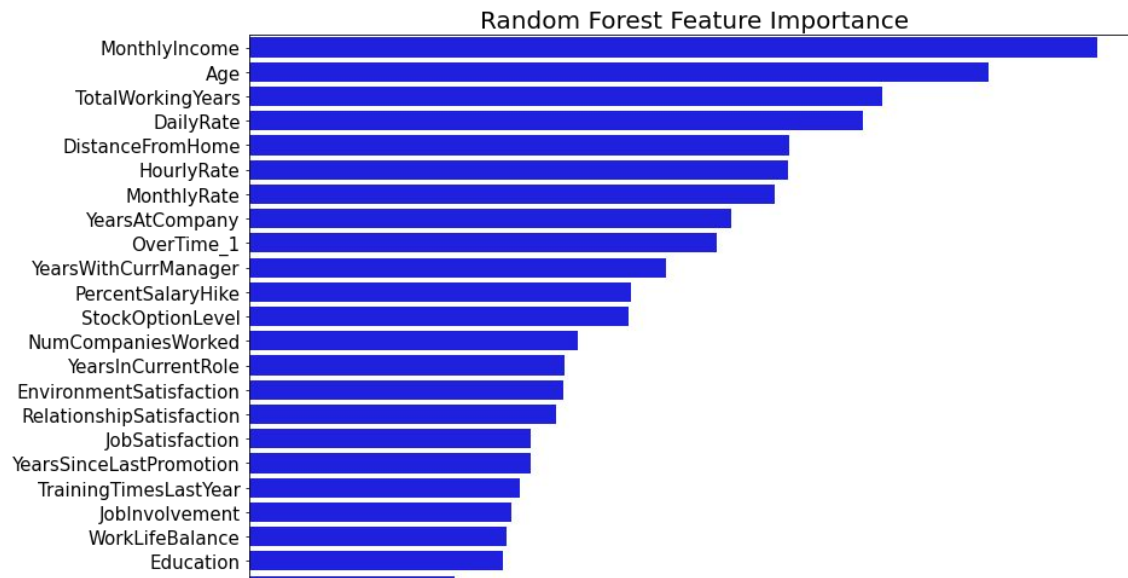


# Model Selection

Most Accurate Model Choice

Model Type	R <sup>2</sup>
Linear Regression	.81
Decision Tree	.82
<b>Random Forest</b>	<b>.86</b>
KNN	.83

# Results





# Future Work and Recommendations

Where else can we take this?

- Recommendation is to Review this Data Quarterly
- Additionally an widened scope to include all attrited employees may help to understand which groupings are different based on Performance Rating
- Targeted programming for younger employees with retention in mind is a good idea as well

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# THANK YOU!

Questions?