

ACTIONABLE INSIGHTS AND RECOMMENDATIONS

Taking into account the key factors that can influence employees to stay, we have developed three recommendations for XYZ to put into practice to decrease employee churn:

1. *Demographic analysis yields interesting insights when comparing the results of the data distribution after our model predictions.*

For instance, we found a shift in the ethnicity distribution of voluntarily terminated employees versus those predicted to voluntarily terminate by our model. The most noticeable difference is that on the original dataset, those employees which did not wish to disclose their ethnicity did not make it into the top 8 ethnic backgrounds whereas for those predicted employees to quit, it makes up a much higher percentage of the ethnicity distribution as shown below.

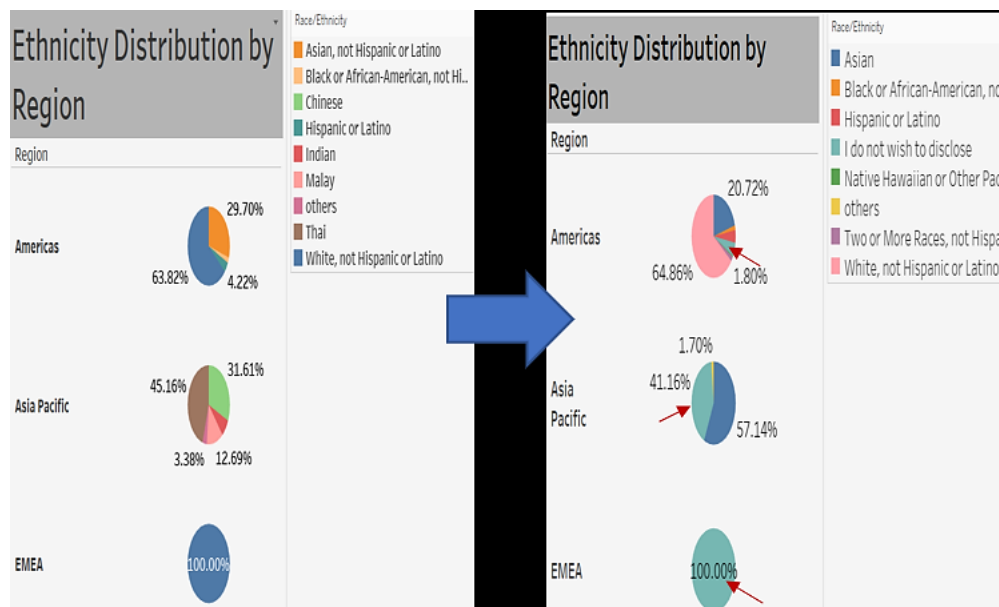


Figure 1: Visualizations of Change in Ethnicity Distribution

From the observed phenomenon, we could infer that those employees who do not feel comfortable sharing their ethnicity are most likely to quit the company. Most importantly, XYZ should look deeper into this issue as there might be an underlying factor influencing this such as a lack of diversity representation where employees do not feel safe sharing their ethnic background.

In this regard, we recommend XYZ to implement a series of diversity-promoting activities and initiatives. These do not have to be ground-breaking but as long as they create awareness of the issue (if it exists), things should start to improve.

Another interesting trend we noticed is that those employees sitting at a mid-level hierarchy of professionals and support workers seem to have been predicted to voluntarily leave more. If we dive a little deeper and check what are the most recurrent reasons for these groups of employees, we find that the most common reason of their departure is related to career advancement/development. As shown below, professionals at levels 4 and 5, as well as support personnel at levels 4 and 5 occupy the top groups of predicted employees to quit.

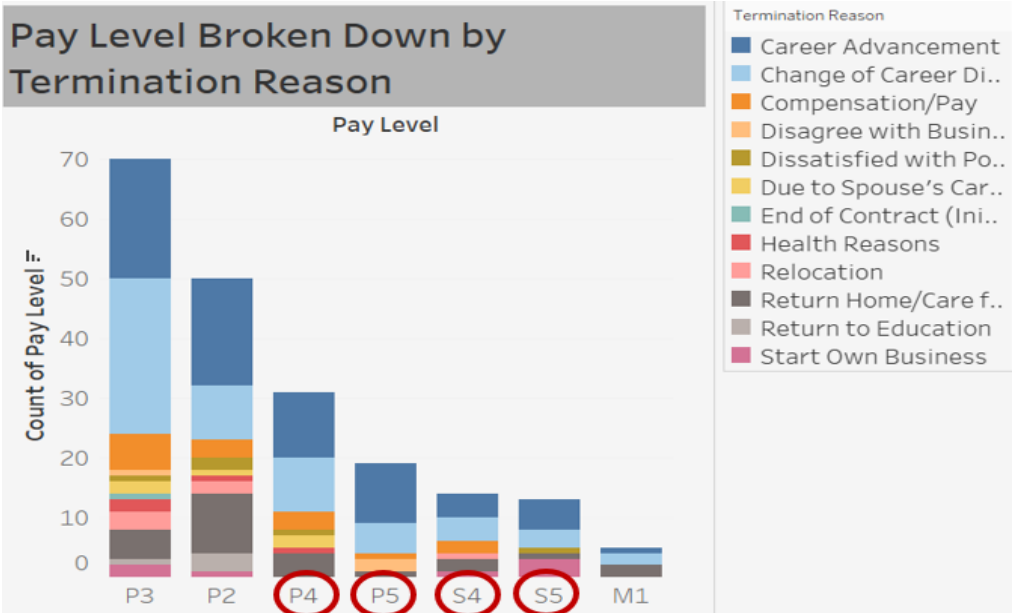


Figure 2: Count of Pay Level Broken Down by Termination Reason

It is worthwhile for XYZ to further investigate this issue as it might be an indicator that employees found at the managerial mid-level of their respective departments hard to climb and thus, end up quitting.

Something that might prove to be beneficial for XYZ is to perform career satisfaction surveys to all their employees, but most importantly, to those who are on or approaching a mid-level seniority in their respective fields.

2. By increasing the compa ratio for potential churning employees

Our XGBoost model projections showed that we may anticipate a turnover of roughly 800 employees. One strategy that might work is to raise their compa ratio by at least 8%, which will lessen the probability that these employees will leave.

We have used the below formula for calculating the cost to company if we increase the compa ratio by 8%.

*Salary = Mid-Point Base Pay * Compa Ratio*

*Cost to Replace Employee = Salary * Mid-Point Multiplier*

As we can see, it would cost the company currently 52 million US dollars to replace all 800 of these terminating workers. The cost to the corporation would be roughly 48 million US dollars as the new wage for these individuals if we increased the compa ratio of these employees by 8%.

The company could potentially make 4 million US dollars in profit and possibly reduce the employee churn rate with this salary increase.

Cost to Replace Terminated Employees	\$52,XXX,XXX (Approx 52 million dollars)
Increase the Compa Ratio by 8%	\$48,XXX,XXX - Raised salary for those employees (Approx 48 million dollars)
PROFIT TO COMPANY	4 million dollars

In turn, this program benefits XYZ in a number of ways, including better employee retention, which raises brand value and qualifies XYZ for best-place-to-work awards, which raises overall brand recognition of XYZ.

3. Focus on role incentives

Based on our analysis, we were able to determine that out of the 800 anticipated employees that were prone to churn, around 680 individuals mainly work in the manufacturing and engineering fields. As you can see from the table below, these individuals have been with the company for more than 10 years on average, are 42 years old, and make around \$60,000 per year in base pay. Some employees are considering leaving the company in search of higher income because the salary is fairly low when compared to the market and their degree of experience.

Job Function	Avg years of service	Terminated Count	Avg Base Pay Midpoint	Avg Age
Engineering	10	458	\$60,405	42
Manufacturing	11	225	\$62,154	42

Some strategies for keeping these workers on board include:

- Offering career growth opportunities and promotions within the organization.
- By increasing their compensation based on the current market trends.
- Improve work-life balance by providing flexible working arrangements, encouraging time-offs and wellness resources.
- Company should recognize and reward good-performing employees to encourage them.