

The background features a light gray field with several large hexagons in white, yellow, and dark navy blue. A thin yellow vertical line runs along the left edge, and a horizontal yellow line is positioned near the top left.

Decoding Employee Turnover: Data-Driven Solutions for CanadaRetail

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BACKGROUND

- Since the retail market in Canada has become increasingly competitive, CanadaRetail has been **struggling to retain** top talent to help them execute their strategic objective.
- They need to start with their **sales associates** because they are the face of the organization and the ones who drive revenue, but, at the same time, have the highest turnover rate compared to other employees.



OBJECTIVES

Solving High Turnover For Sales Associates

- **Contributing Factors:** What drives the employees to leave?
- **Recommendation for Transformation:** Based on the key factors, what should we do to reduce turnover?

DATA OVERVIEW

✔ No Missing Value

✔ No Duplicate

✔ Abnormal Values Deleted

Employee Data

Time Range

October 2019

Total Employee

8,798

The personal attributes, employment details, performance matrices and survey results of each sales associate.

Store Data

Time Range

January 2018 - October 2019

Total Store

591

The performance, financial metrics, and demographics of each store.

Applicant Data

Time Range

Unknown

Total Applicant

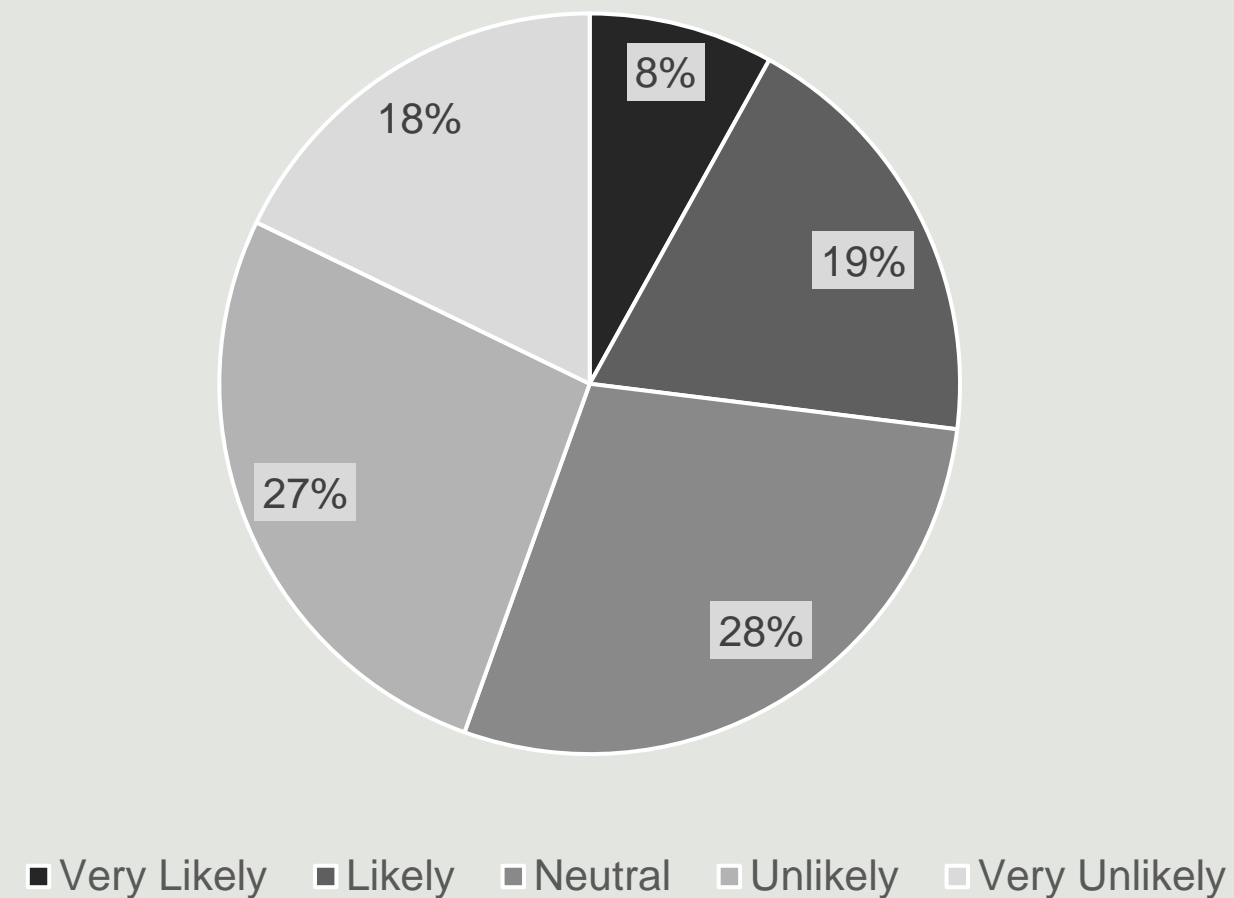
54

The personal attributes, experience, and other assessment scores of each sales associate applicant.

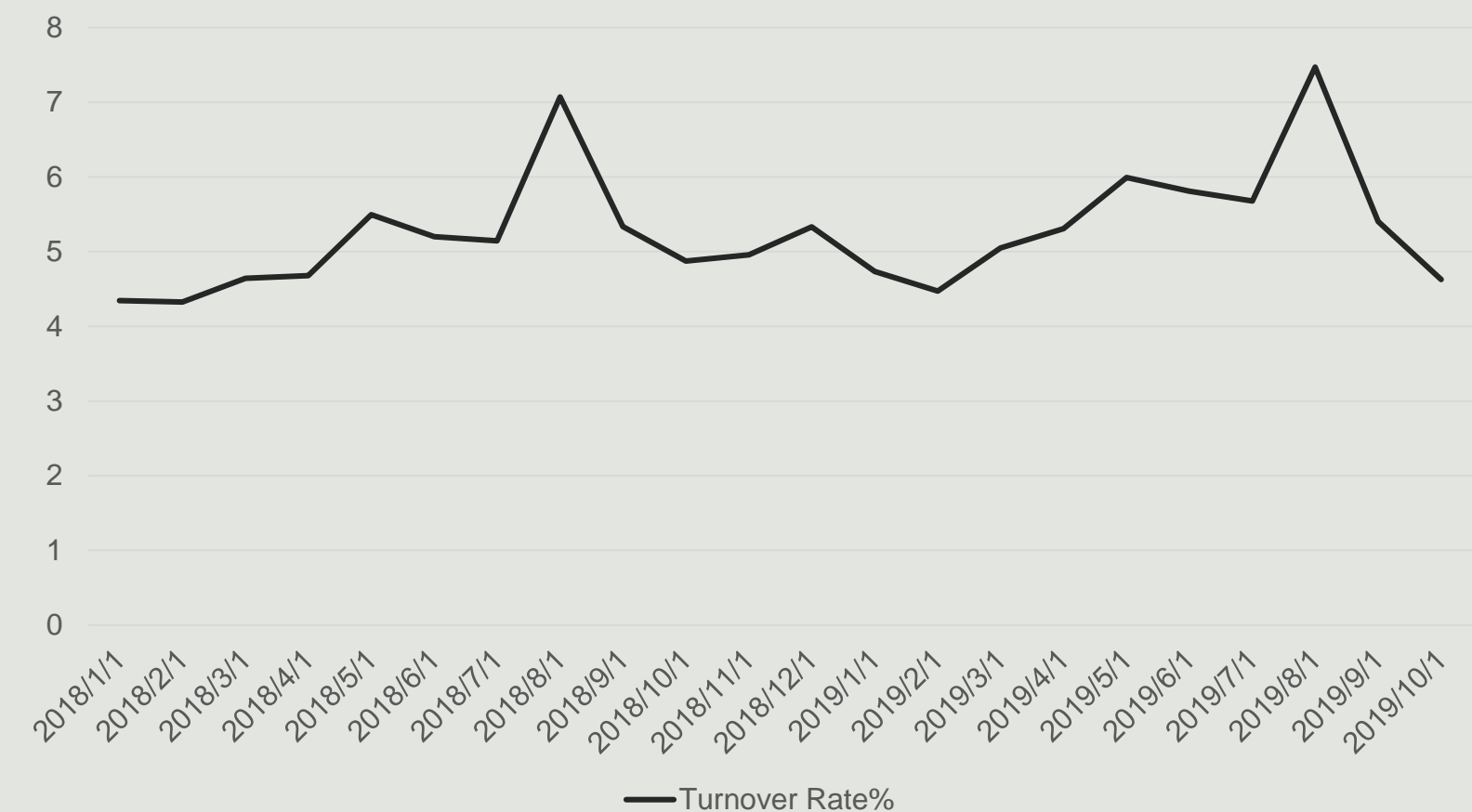
Turnover

About **27%** of the employees expressed intention to leave the company in October 2019. According to the time trend of voluntary turnover rate, this percentage could get higher in the other months.

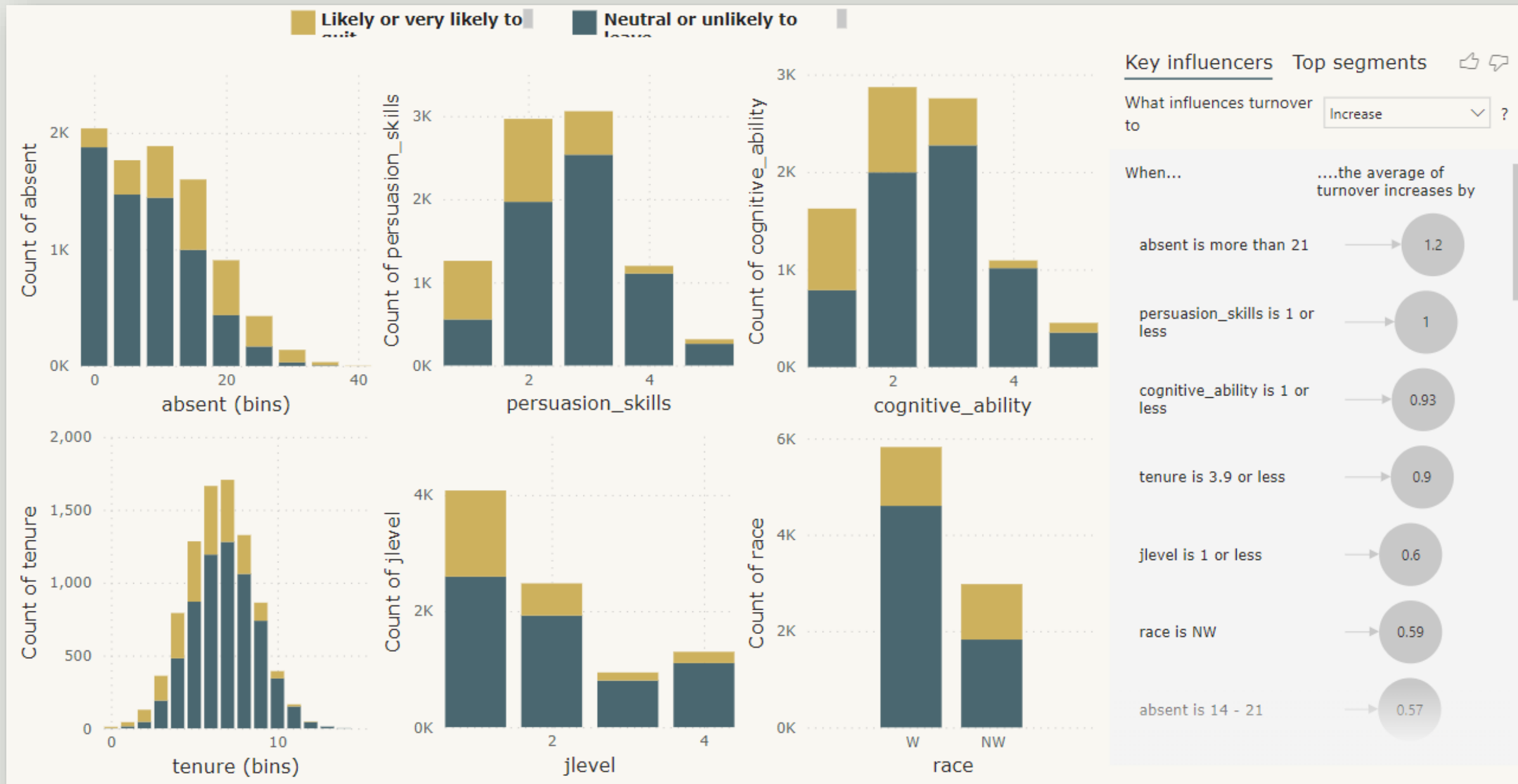
“How Likely Is That You Will Quit Your Job In The Next Several Months?”



Voluntary Turnover Rate Over Time



CONTRIBUTING FACTORS



Finding Contributing Factors:

- Distribution
- Key Influencers

Absence Times

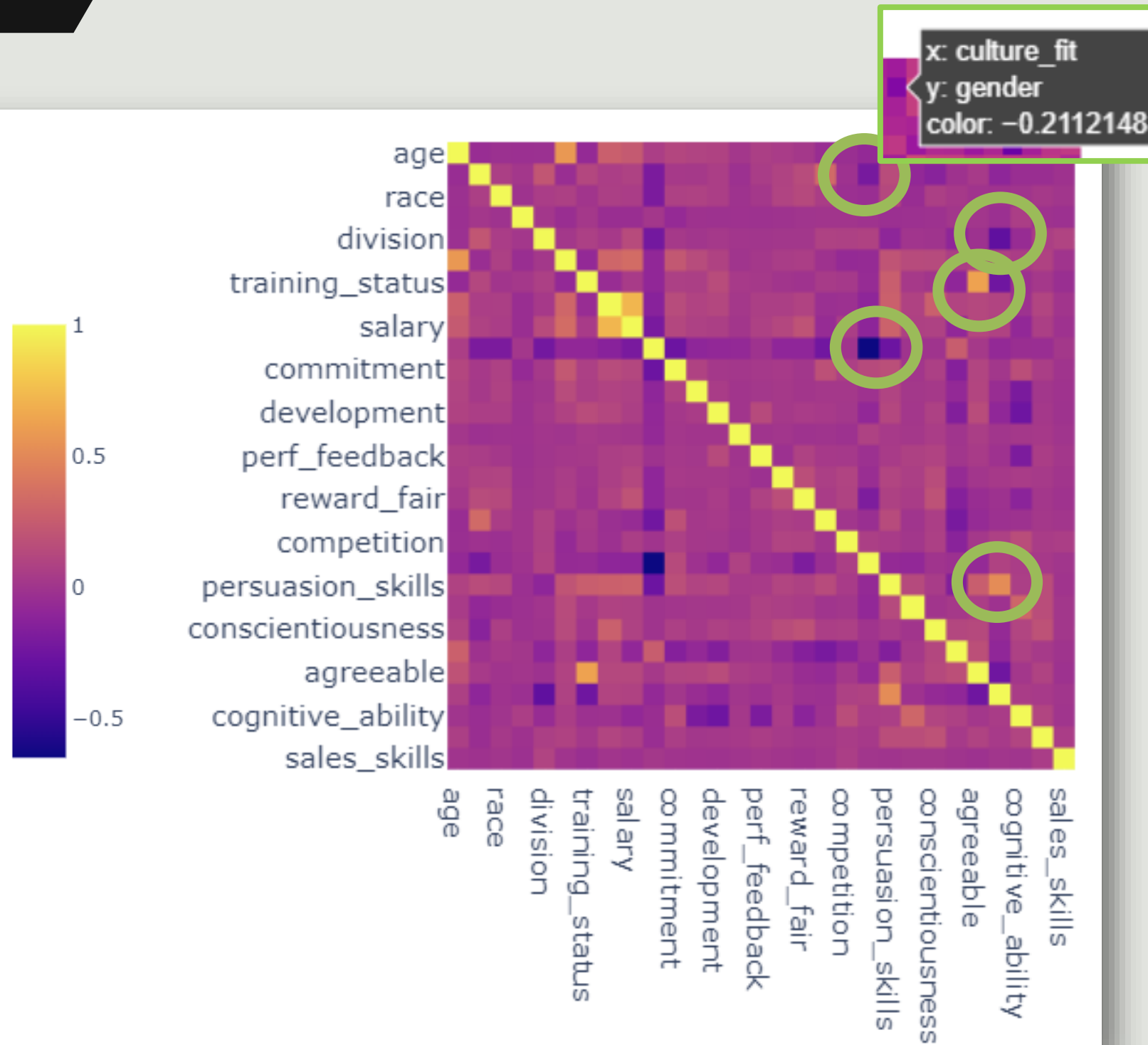
Persuasion Skill

Cognitive Ability

Tenure

Job Level

CONNECTIONS BETWEEN FACTORS?



Features:

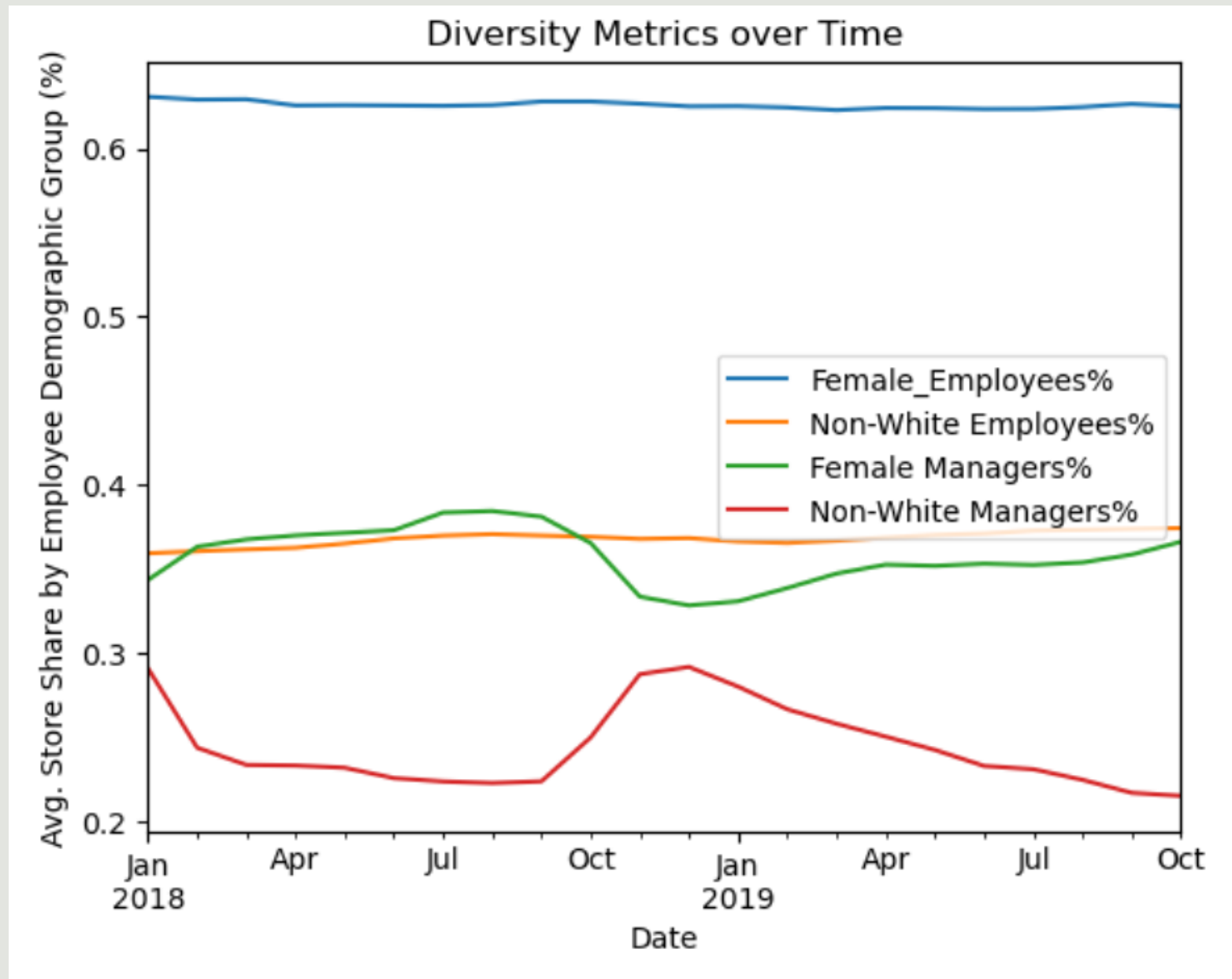
- **Attributes:** Age\Gender\Race...
- **Surveys:** Commitment\Culture fit...
- **Test Scores:** Persuasion\Agreeable...

Findings:

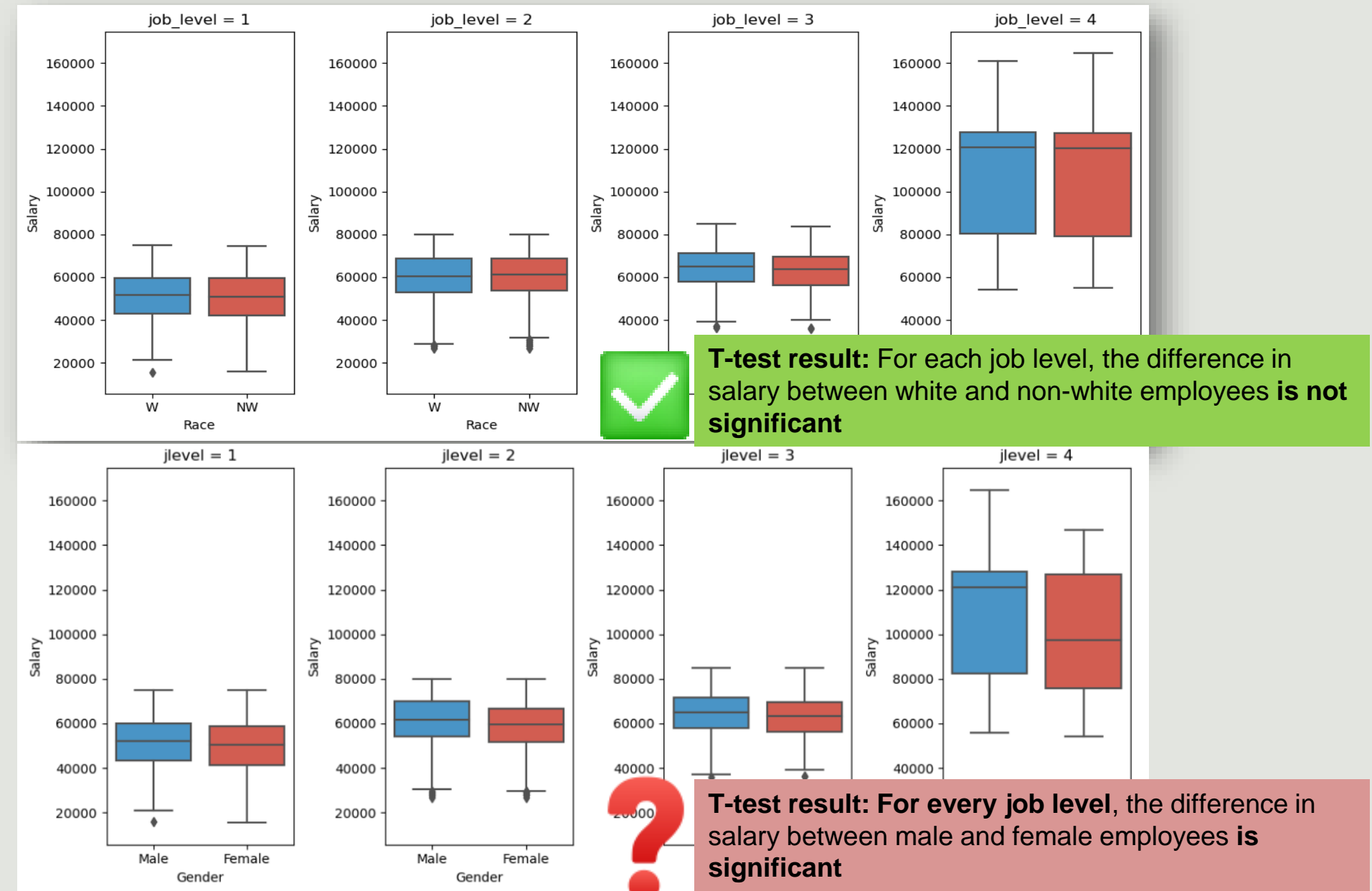
- **Woman employees – lower culture fit**
- Lower culture fit – more absences
- Better persuasion skills – higher openness scores
- Office Products division – lower openness score
- Trained employees – higher agreeable scores

DIVERSITY AND EQUITY?

Store-level Diversity



Payment Equity



CONTRIBUTING FACTORS



TRAINING & DEVELOPMENT

- Lack of Training
- Most Junior/ Short Tenure
- Persuasion/Cognitive



EQUITY & FAIRNESS

- Racial Bias
- Gender Bias



CULTURE & ENVIRONMENT

- Commitment
- Work Life Balance
- Divisions

* Results are generated by “Key Influencers” in Power BI. Please refer to appendix for more detailed results.

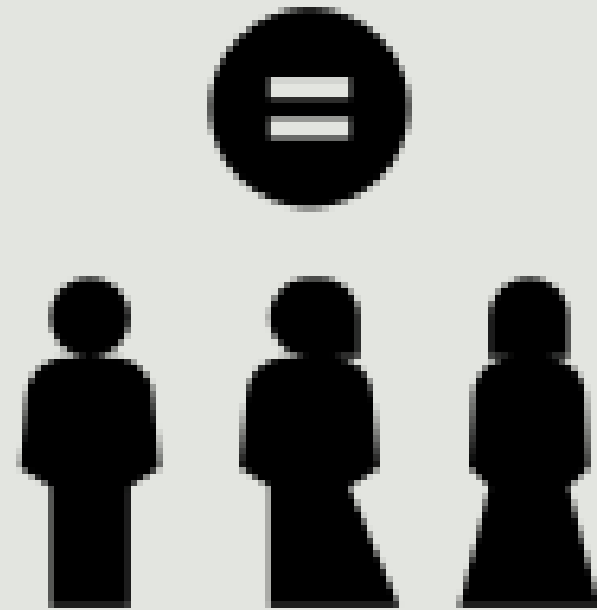
Data Analytics

TRAINING & DEVELOPMENT



- **Training and Learning:** Accessibility to training program and learning resources.
- **Specific Skills Mentors:** If sales associates find difficulties of handling important skills (persuasion, cognitive ability), they can apply for mentors or specific training.
- **Motivation for Development:** Encourage long-term professional growth within the organization by setting clear promotion plans.

EQUITY & FAIRNESS



- **Maintain Diverse Working Environment:** Inspect bias during recruitment and selection process;
- **Implement Equal Pay Policies:** Ensure transparency for compensation decisions; Regular pay equity review.
- **Balance in Managerial Roles:** Woman Leadership Program; Asian Pacific Network; EDI training for managerial roles;

CULTURE & ENVIRONMENT



Team Cohesion

- Target: Boost employees' commitment.
- Stronger workplace disciplines
- Festival events, knowledge & stories sharing workshops, etc.



Selection with Models

- Target: Predict culture fit, turnover will, and performance scores.
- Test score: openness, agreeable, extraversion.
- Be mindful about bias!

Recommendations

LIMITATION

1

External Turnover Reasons

2

Better Benchmarks

3

More Rigorous Statistics Approaches

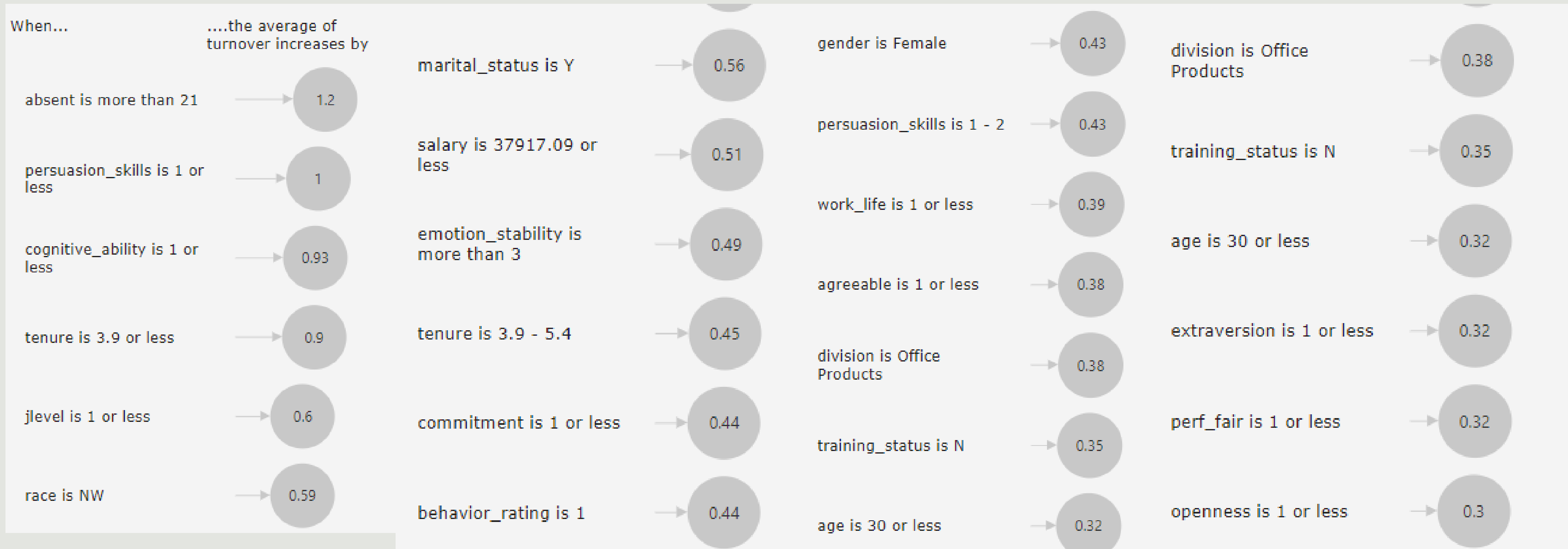


THANK YOU



APPENDIX

Key Influencers



APPENDIX

Data Dictionaries

Employee Dataset

Variable Name	Description
id	Employee ID
age	Employee age
gender	Female, Male
race	W, NW
marital_status	Y, N
education	Some high school; High school diploma or equivalent; Some college; Post-secondary degree
division	Computer & Electronics; Cellphones and Accessories; Home Appliances; Office Products
tenure	Employee's sales experience (in years)
training_status	Y, N (If the employee had any sales training)
ilevel	Level of sales job seniority. 1: most junior positions, 4: most senior positions
salary	Annual salary
absent	Number of days absent in the previous year
turnover	How likely is that you will quit your job in the next several months? (5 = very likely, to 1 = very unlikely)
persuasion_skills	Persuasion skill score from when the person applied for this job. Scale 1 to 5; 5 = very good; 1 = very poor
commitment	I'm willing to go the "extra mile" for this firm. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
respect	Employees are treated with respect, regardless of their job. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
development	I believe I have the opportunity for personal development and growth in this firm. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
goal	I have a clear understanding of the responsibilities, goals, and objectives of my job: (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)

perf_feedback	My manager gives me regular feedback on my performance. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
perf_fair	My performance on the job is evaluated fairly. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
reward_fair	My reward on the job is evaluated fairly. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
work_life	My work schedule allows sufficient flexibility to meet my personal and family needs. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
competition	This firm is doing better than our competition in providing innovation and quality to the marketplace. (5=strongly agree; 4=agree; 3=neutral, 2=disagree; 1=strongly disagree)
culture_fit	How well do you think you have fit in organization's culture? (5 = Very Well; 1 = Very poorly)
extraversion	Personality (extraversion) test score. (5 = very extravert; 1 = very introvert)
conscientiousness	Personality (conscientiousness) test score. (5 = very conscientious; 1 = very unconscientious)
emotion_stability	Personality (emotion stability) test score. (5 = very high; 1 = very low)
agreeable	Personality (agreeableness) test score. (5 = very agreeable; 1 = very disagreeable)
openness	Personality (openness to experience) test score. (5 = very open; 1 = very unopen)
cognitive_ability	Cognitive ability test score. (5 = very good; 1 = very poor)
structured_interview	Structured interview score from when the person applied for this job. (5 = very good; 1 = very poor)
behavior_rating	Supervisor's rating on employee's behavior during work. (3 = very good; 1 = very poor)
business_rating	Supervisor's rating on employee's business performance during work. (3 = very good; 1 = very poor)
sales_skills	Sales skills score from when the person applied for the job. (5 = very good; 1 = very poor)

position	name	varlab
1	store_id	Store ID
2	locnearestformat	LOC: KM to nearest same format store (CanadaRetail)
3	locnearestany	LOC: KM to nearest other competitor stores
8	locrevenuetarget	FIN: Location (Store) revenue target
9	locrevenueactual	FIN: Location (Store) revenue actual
10	locgmarget	FIN: Location (Store) gross margin target
11	locgmactual	FIN: Location (Store) gross margin actual
12	locexpensetarget	FIN: Location (Store) expense target
13	locexpenseactual	FIN: Location (Store) expense actual
14	locbitdatarget	FIN: Location (Store) EBITDA target
15	locbitdaactual	FIN: Location (Store) EBTIDA actual
16	minwage	Minwage in store
17	unemployed	Metropolitan area's unemployment rate in year
18	edu14	Metropolitan area's share of population with at least 14 yrs of education in year
19	year	Year
20	month	Month, 1 is Jan
21	yrmo	yearmonth code
22	population	Store population in month
23	Voluntary_turnover	Voluntary turnover rate in store-month
24	Layoff	Layoff rate in store-month
25	Hiring	Hiring rate in store-month
26	unitmonth_female	Ratio of female employees in store-month
27	unitmonth_ftpt	Ratio of full-time/Part-time employees in store-month
28	unitmonth_hrlryrate	average hourly pay in store-month
29	unitmonth_white	Ratio of White employees in store-month
30	tenure	average tenure in store-month
31	rmgrwhite	Ratio of white managers in store-month
32	rmgrfemale	Ratio of female employees (managers) in store-month