What makes employees leave: A tale of two organisations

By Brianna O'Connor and Shannon Chen

Why did we choose to investigate this topic?

What data did we want?
Did we find it?

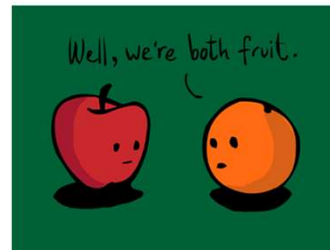**How** did we settle on a suitable dataset?

Preparing the Data

Org A: Sales Team in an Insurance Firm

- Over 19k rows of data
  - employee data noted at multiple timepoints
- 2381 Unique Employees

Org B: Organisation from an unspecified industry

- Over 14k Unique Employees
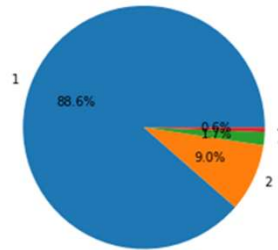- Multiple departments

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Who are leaving?
The Best and the Brightest? 'Bad' workers? Certain Departments?

Why did they leave?

➔ **Working across the lifespan?**
Demographic trends?

➔ **Performance Management?**
Were employees' salary proportional to their efforts and role? Were promotions given to the best worker?

➔ **Workload? Type of Work?**
Overworked employees? Long hours?

Who is leaving? Org A

Poor performers & lower designations

- **88% of employees leaving had a quarterly rating of 1**

88.6% 0.6% 1.7% 9.0%

- **Lower designations are over-represented in the leaving statistics**

Who are leaving? Org B

promotion_last_5years	Current_status	last_evaluation		number_project		average_montly_hours	
		mean	median	mean	median	mean	median
0	1	0.715527	0.715	3.786395	4	199.001168	198.0
	2	0.718806	0.790	3.859797	4	207.577984	224.5
1	1	0.713467	0.710	3.796667	4	201.250000	208.0
	2	0.588421	0.560	3.052632	2	177.736842	160.0

99.47% **of employees who left:**

- NO promotion in the last 5 years
- Despite having best recent evaluation, working more hours, and taking on more projects as compared to other employees

Who are leaving? Attrition Rate By Department

Org A: Sales Team

Stayed 32.1%

Left 67.9%

67.9% for Sales

Attrition Rate by Departments

Attrition Rate (%)

Departments
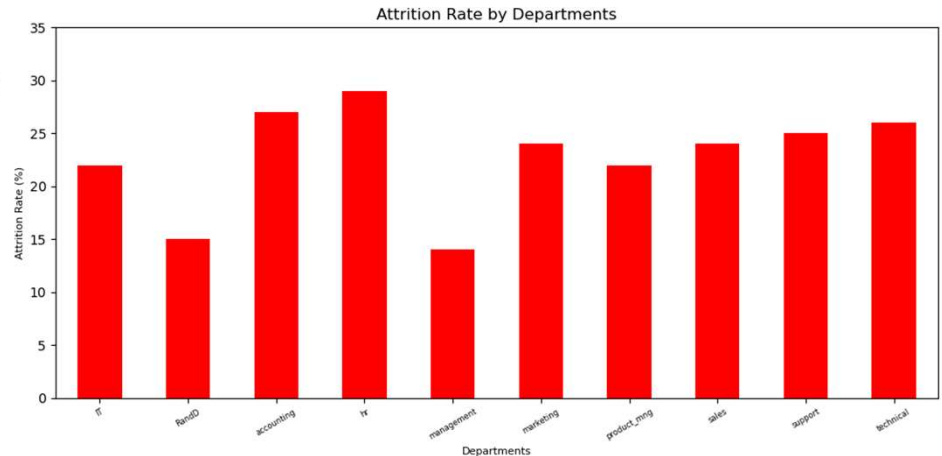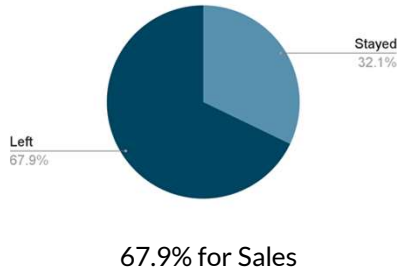
Org B: HR, Accounting and Technical have highest rates (all above 25%).
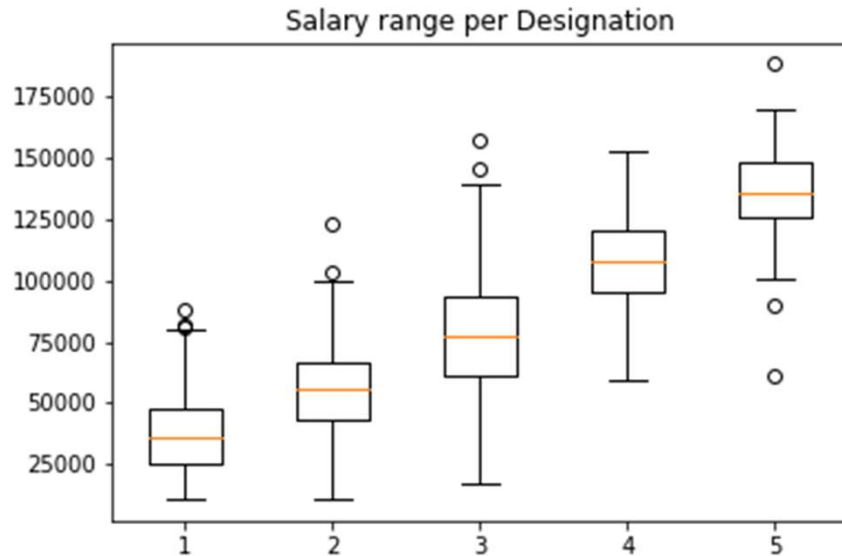
Sales Team (24%)

Performance Management

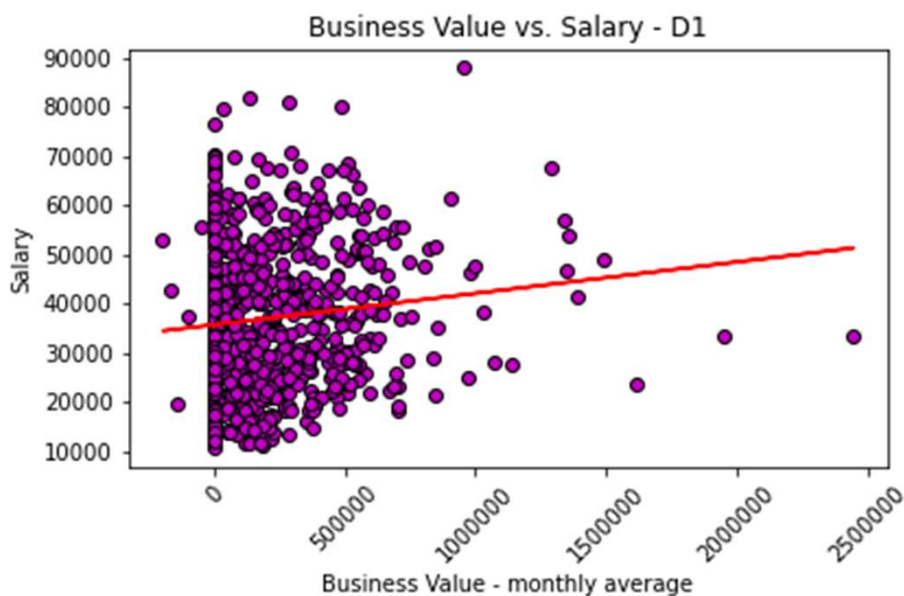**Were employees' salary proportional to their efforts and role?**

Were promotions given to the best worker?

Performance Management: Salary

Salary per designation has huge range, with **some level 1 employees being paid more than level 4 and 5 employees.**

Salary range per Designation

What determines Salary? Business Value?

Business Value vs. Salary - D1

Using Designation 1 as an example, we can see there are a multitude of employees with an average monthly **business value of 0, regardless of their salary.**

The top performers are not earning high salaries.

What determines Salary? Business Value?

There is very little correlation between salary and business value at designations 1 to 4, and no correlation at designation 5.

Designation	pvalue	rvalue	Coefficient of determination
D1	**0.001430**	0.116150	0.013491
D2	**0.000000**	0.223202	0.049819
D3	**0.000000**	0.211118	0.044571
D4	**0.031103**	0.181651	0.032997
D5	**0.933843**	**0.017899**	0.000320

Gender bias? Unlikely . . .

58-60% male, 40-42% female at all levels.

❖ Not 50-50 split expected
❖ Proportion is same at all designations - women are not being held back from promotion
❖ Salary is equal between genders at all levels - women are not being paid less for doing the same job

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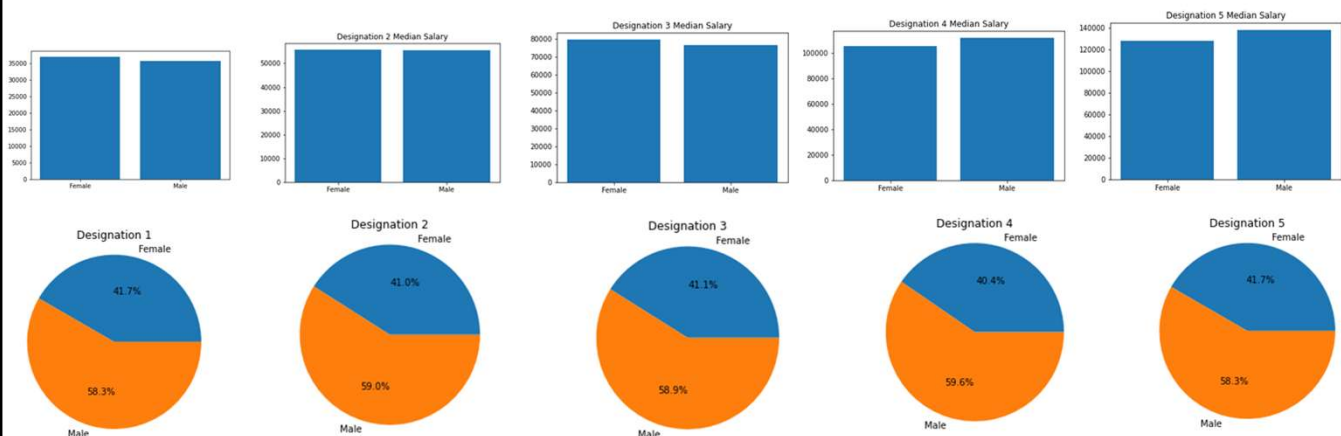
Workload & Type of Work

Did employees leave because they were overworked?

Why did they leave? (Job Satisfaction)

Org B - Job Satisfaction had an effect on tenure.

Org A - no Job Satisfaction variable

Scatterplot of Job Satisfaction vs Tenure(Days) for Leavers

$y = 603.62x + 1149.27$

Tenure (Days) — Level of Satisfaction

Employees who left Org B: Weak but significant positive correlation between Tenure(Days) and Job Satisfaction - 0.45 (p < .0001). As job satisfaction increases, tenure increases (and vice versa).

Why did they leave? (Workload)

For Org B: 'Number of Projects' operationalised as an employee's workload, where more projects meant a higher workload.
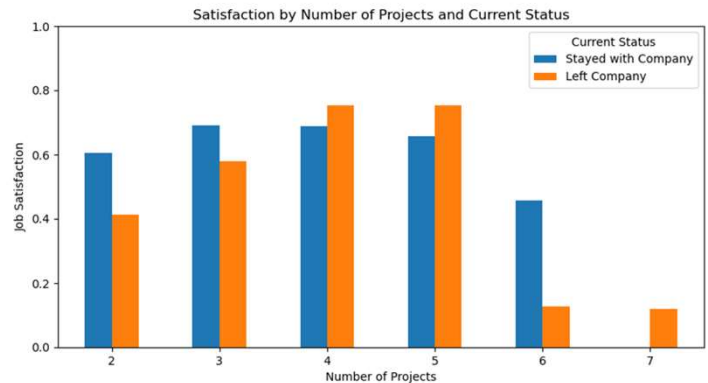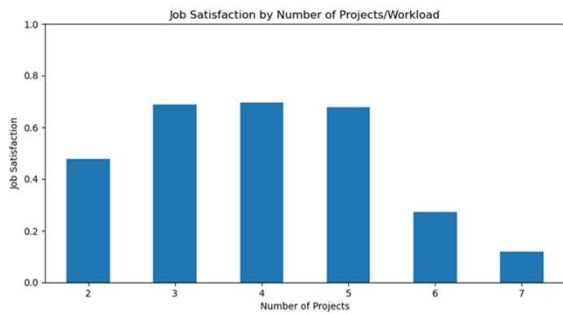
Job Satisfaction is lowest when workload is high (Number of Projects > 5) or when workload is low (Number of Projects = 2). Trend persists when looking separately at stayers and leavers.

Relationship between workload and job satisfaction for leavers
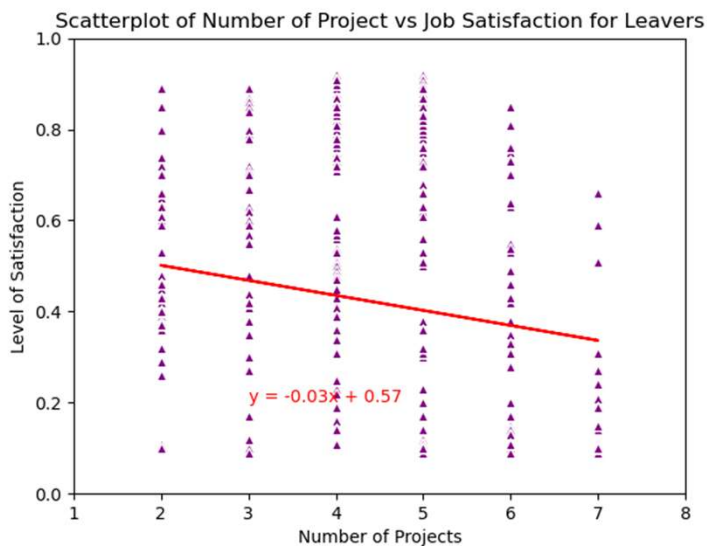
Correlation between 'Number of Projects' (re. Workload) and Job Satisfaction: -0.23 (p < .0001)

Such that job satisfaction decreases as workload increases.

Recommendations

A tale as old as time - ensure that your best performers and hardest workers are recognised and rewarded. If not, they will leave.

Review salaries regularly to ensure fair reward. Consider bonuses or commissions for high earners

Low and high workload can potentially affect job satisfaction negatively.

Limitations of analysis

➔ **POINT 1 - both Companies**
Circumstances of Termination - did they quit or were they fired?

➔ **POINT 2 - both Companies**
Type of hire - recruitment agency, internship

➔ **POINT 3 - Org A**
Data from previous years to map career progression

➔ **POINT 4 - Org B**
Demographic information

➔ **POINT 5 - Org B**
Salary details

➔ **POINT 6 - Org B**
Data from previous dates - particularly evaluation and satisfaction