NextGen Employee Analytics Capstone Project

EMPLOYEE RETENTION, PERFORMANCE, AND SALARY ANALYSIS

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BUSINESS OVERVIEW

NextGen Corp. is a growing tech company that focuses on building innovative software and hardware. To stay ahead of the competition, the company spends **$3.0 Million** every year on active salaries to attract top talent. When I started this project, my goal was to look at this $3M investment and see if it was actually driving the growth we want. I wanted to see if our staff are satisfied and if the company is getting a high return on the money it spends on payroll.

The Business Challenge While analyzing the data, I found some serious "red flags" that the company needs to address. We've had **28 people leave** recently, and turnover is hitting us hard especially in **Marketing, where the turnover rate is 93%.** The real problem is a disconnect between pay and performance: we are carrying **12 underperformers** on the payroll, yet we are losing our most talented people (like our **Engineers who have a high 4.3 score**). Essentially, we are overpaying for low results and failing to keep our best workers.

The Objective I used SQL to move from "guessing" to "knowing" exactly where these problems are. My goal is to give NextGen a data-driven plan to:
Fix Salary Disparities: I want to ensure pay is fair by identifying cases like **Bob Lee**, who earns a high **$90k** despite an average **3.0 score**.
Improve Retention: I want to understand why **11 people** left for "Personal Reasons" and find zero-cost ways to keep them.
Protect the $3.0M Budget: By the end of this, I will show you how to reward our top performers and loyal veterans like **David Moore**, so we stop losing our best talent to the competition.

EMPLOYEE RETENTION ANALYSIS

Top 5 Serving Employees

Top_5_Serving_Employees	
full_name	**days_served**
David Moore	3858
John Johnson	3739
Frank Johnson	3510
Frank Smith	3499
Jane Lee	3473

Turnover Rate by Department

Turnover_rate by Department

Marketing 93
Engineering 67
Sales 28
HR 27

Analysis: Our data shows a core group of "Company Pillars." Employees like David Moore (3,858 days) have been with NextGen for over a decade. These individuals represent the heart of our history and work processes.

Strategic Insight: This is our Institutional Knowledge. If these five people leave, they take ten years of "how-to" experience with them. Replacing this level of experience is much more expensive than the cost of keeping them happy.

Recommendation: Start a Mentorship Program. Formally ask these veterans to help train new hires. This makes the veterans feel valued for their long service and ensures their knowledge stays in the company even if they eventually move on.
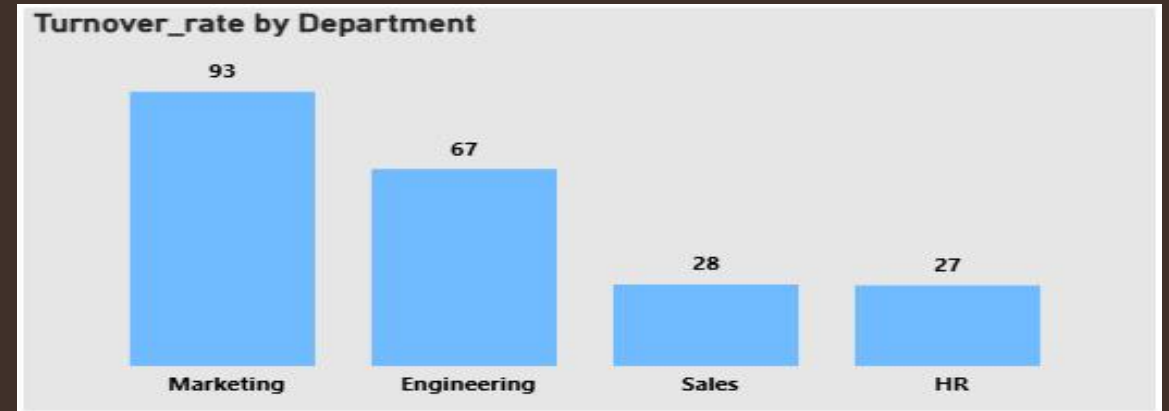
Analysis: Marketing (93) and Engineering (67) have the highest number of departures. While other teams are stable, our technical and creative hubs are losing people at a high rate.

Strategic Insight: A high turnover in Marketing is a serious warning sign. It suggests a problem with the work environment or management within that specific team. In Engineering, losing people is dangerous because they do our most difficult technical work.

Recommendation: Conduct an Engagement Audit in Marketing to find out why people are unhappy. For Engineering, we need to check if our pay is competitive enough to stop other companies from taking our best talent.

EMPLOYEE RETENTION ANALYSIS
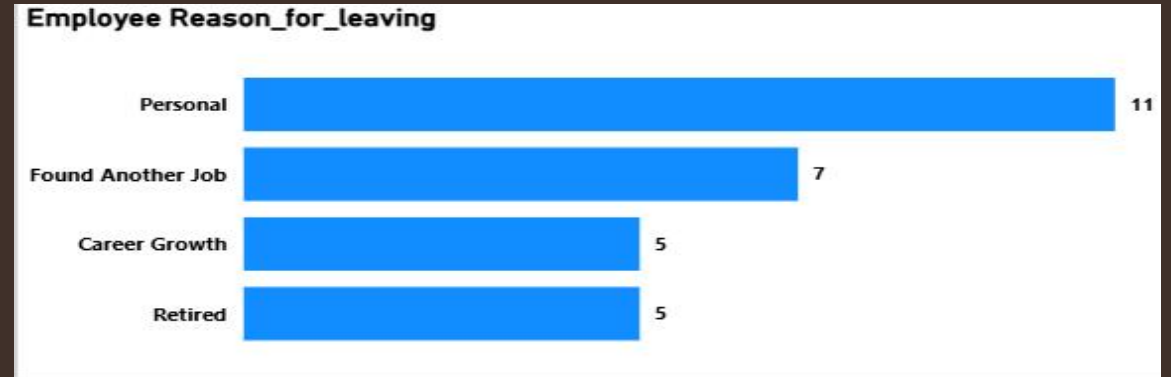
Employees at Risk of Leaving (Low Performance)

Active_Employees_At_Risk

full_name	department_name	performance_score
David Moore	Sales	3.00
Eve Davis	HR	3.00
David Green	HR	3.10
David Johnson	Sales	3.20
John Moore	Sales	3.20
Bob Doe	HR	3.30
Bob Miller	Sales	3.30

Main Reasons Employees Are Leaving

Employee Reason_for_leaving

Reason	Count
Personal	11
Found Another Job	7
Career Growth	5
Retired	5

Analysis: We have identified 7 active employees who have been here a long time but now have low performance scores (3.0 to 3.3). Our #1 veteran, David Moore, is on this list.

Strategic Insight: These are At-Risk Employees. When a long-term worker's performance drops, it usually means they are burnt out or have lost interest in their current role. They are "at-risk" of leaving or spreading low energy to others.

Recommendation: Hold "Stay Interviews" within the next two weeks. Ask these 7 people: "*What would make your work more exciting again?*" A change in their daily tasks might save years of experience.

Analysis: The top two reasons for leaving are "Personal" (11) and "Found Another Job" (7).

Strategic Insight: In modern business, "Personal Reasons" usually means the employee needs more flexibility. If our staff cannot balance their work and home lives here, they will look for "Another Job" that offers a better balance.

Recommendation: Create a Flexible Work Policy. Offering hybrid work or flexible hours addresses the #1 reason people leave without costing the company any extra money in salary increases.

PERFORMANCE ANALYSIS

Total Employees Who Left

28
Total_Employee_Depature

Performance Score Distribution

Perf_Distribution

12 Underperform...

1 Elite Performer...

Analysis: 28 Departures is a large number for a mid-sized company. Every time a person leaves, we lose money on recruiting, hiring, and training their replacement.

Strategic Insight: This is our Attrition Cost. If it costs thousands of dollars to replace just one person, losing 28 people has cost the company a significant amount of money that could have been used for growth.

Recommendation: Set a clear goal to reduce this number by 20% next year. We can achieve this by paying closer attention to our "At-Risk" staff and fixing the issues in Marketing.

Analysis: The data shows an imbalance. We have 12 Underperformers but only 1 Elite Performer with a score of 5.0.

Strategic Insight: The company is "Bottom-Heavy." We have too many people doing the bare minimum and not enough people driving the company toward excellence. This lowers the overall quality of our work.

Recommendation: Improve our Training and Development. Focus our efforts on moving those 12 underperformers up to a "Solid" level. We need to raise the bar so that "Average" is no longer the standard.

PERFORMANCE ANALYSIS

Performance by Department
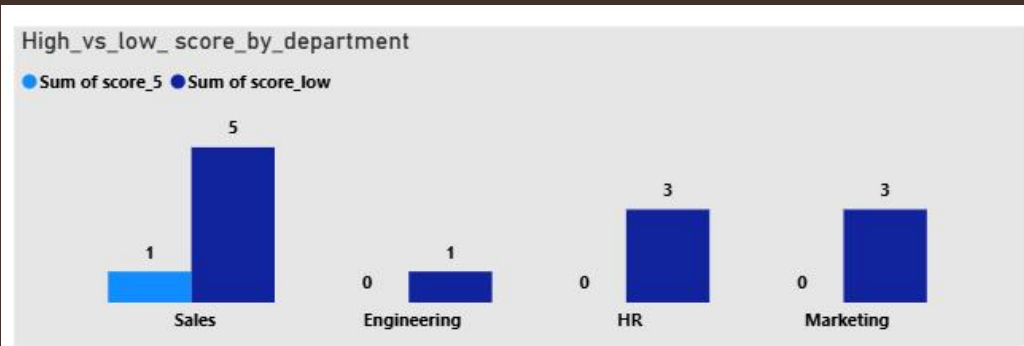
Analysis: Sales shows the most uneven results. The department has our only "5.0 Score" worker, but also has 5 Underperformers (the most in the company).

Strategic Insight: Sales is relying on a Single Star. If that one top performer leaves, the whole department will struggle because the other five are not performing at a high level.

Recommendation: Have the top performer lead a "Best Practices" Workshop. Let them teach the other five how they achieve their results so the whole team improves together

Top Performing Departments (ROI Benchmark)

Analysis: **Engineering** is the best team in the company with a **4.3 average**, followed by HR at 4.0.

Strategic Insight: This is a major concern. Our **best-performing team (Engineering)** is also the one with high turnover. This means we are losing our most valuable workers faster than any other group.

Recommendation: Engineering must be our **Top Priority**. We need to do whatever it takes to keep these high-performing workers happy, as they provide the best results for our $3M investment.
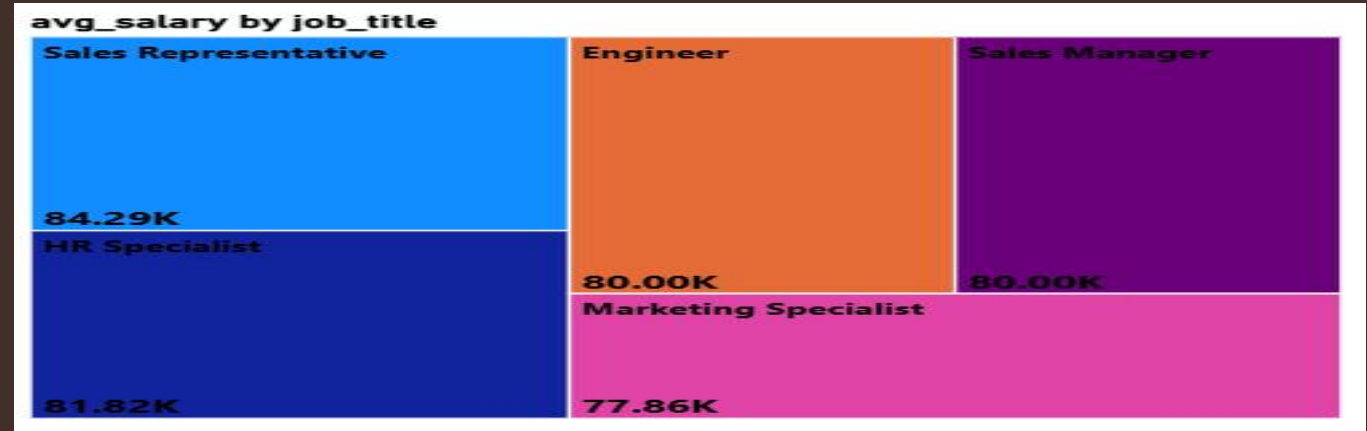
SALARY ANALYSIS

Total Active Salary

Salary and Roles

avg_salary by job_title

Sales Representative	Engineer	Sales Manager
84.29K	80.00K	80.00K
HR Specialist	Marketing Specialist	
81.82K	77.86K	

The Data: **$3,000,000** in total active payroll.

Strategic Insight: This is our **Operational Expenditure (OpEx)**. Every underperformer on the payroll represents Sunk Cost.

Recommendation: Use this total to calculate the **Revenue per Employee** to see if our staff are generating more value than they cost.

Analysis: **Sales Representatives** are the highest paid at **$84,000**, while **Engineers** are paid less at **$80,000**.

Strategic Insight: There is a **Salary Fairness Issue**. We are paying our Sales team more money, even though our Engineering team has much higher performance scores (4.3 vs 4.0).

Recommendation: Review our pay scales. To be fair, salaries should be more closely tied to how well an employee performs their role, not just their job title.

We are paying a premium for Sales roles ($84k) despite the department having the highest number of underperformers. This indicates a Negative ROI. > Recommendation: Align Sales pay with performance targets rather than a high base salary.
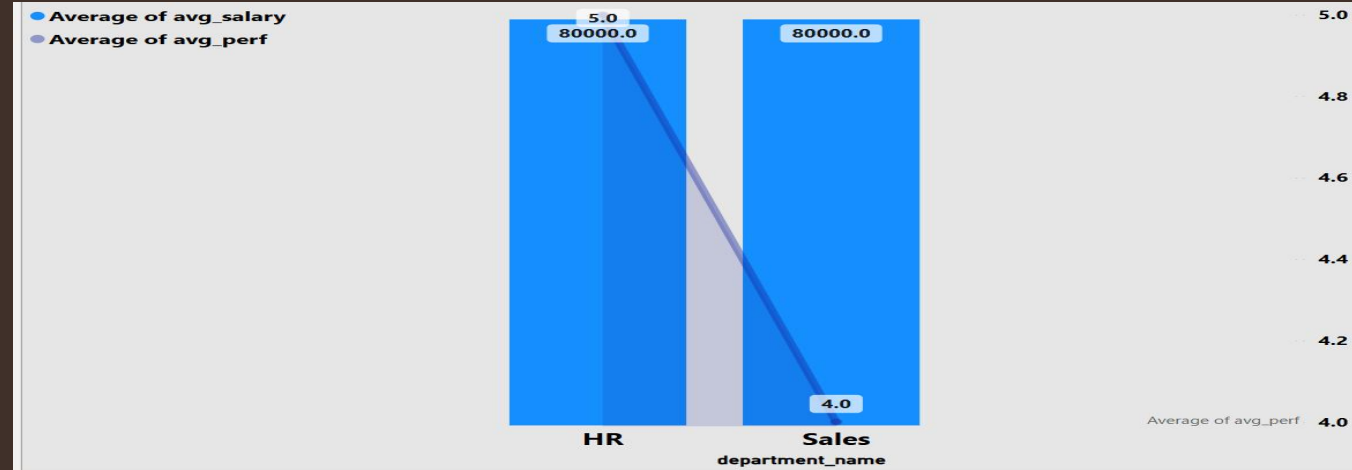
SALARY ANALYSIS

The Top Earners $80k

13
Employees Earning > $80k

Performance vs. Salary Correlation

Average of avg_salary
Average of avg_perf

HR   Sales
department_name

Analysis: **13 employees** earn more than $80,000 per year.

Strategic Insight: These people represent our **Highest Salary Risk**. Because they take up the largest part of the budget, they should be our top performers.

Recommendation: Check the scores of these 13 people. If any of them are "Underperformers," we are losing money on them. High pay must be reserved for high results.

Analysis: The data shows **Sales** has High Pay but Low Performance. **HR** has High Pay and High Performance.

Strategic Insight: We are getting a **Low Return on Investment (ROI)** from Sales. We are paying them a top-tier salary for average work.

Recommendation: Change the way we pay Sales. Lower the "base pay" and offer **higher bonuses for results**. This pushes the underperformers to improve if they want to keep their $84k salary.

Detailed Final Recommendations

Look after our Veterans: We have 5 people, like **David Moore** and **John Johnson**, who have been here for over 3,000 days. They are the "heart" of the company. We need to meet with them one-on-one to make sure they are happy and stay with us.

Balance the Pay: Right now, **Sales Reps** make the most money (about **$84K**), but **Engineering** has the best performance scores (**4.3 average**). We should move some of the budget to Engineering to reward our best workers so they don't quit.

Help the Underperformers: We have **12 people** struggling with low scores. Instead of just letting them go, we should give them 90 days of training. If we get them working better, we get much more value out of our **$3 Million payroll.**

Offer Flexible Hours: The data shows that **"Personal Reasons"** is the biggest reason why **28 people** left. Giving people the option to work from home or have flexible hours is a free way to keep them from leaving.

Final Thoughts & What This Means

What I found: After looking at the **$3.0 Million** we spend on salaries, it's clear we are overpaying in some areas and underpaying in others. A good example is **Bob Lee in Marketing**. He makes **$90,000**, but his performance is only a **3.0**. This is a "financial leak" for the company. We are also losing too many people in **Engineering (67% turnover)**, which is our strongest department.

The Result: NextGen doesn't need more money; it needs to spend its **$3M** more wisely. If we fix the pay gap between Sales and Engineering and help our **12 underperformers** get better, the company will be much stronger.

Closing Statement: By using this SQL data, we can stop guessing and start making decisions that actually save money and keep our best people.

EXTRA ANALYSIS

The High-Salary Risk: While the average salary is $80k, my SQL query found people like **Bob Lee ($90k)** with a performance score of only **3.0**. This shows we are losing money on high salaries that don't bring high results.

Veteran Burnout: I noticed that some of our 5 longest-serving employees have scores that are starting to drop. This is a big warning sign for "burnout." We need to support them before they decide to leave.

The Engineering Gap: Even though **Engineering** has the best scores (**4.3**), they have a **67% turnover rate.** This tells me they are likely unhappy with their pay compared to Sales, or they are being overworked.

Zero-Cost Retention: Since **"Personal Reasons"** is the #1 reason for leaving, we don't need to spend more money to keep people. Simply changing the **work-from-home policy** would likely stop many of the 28 departures we saw.