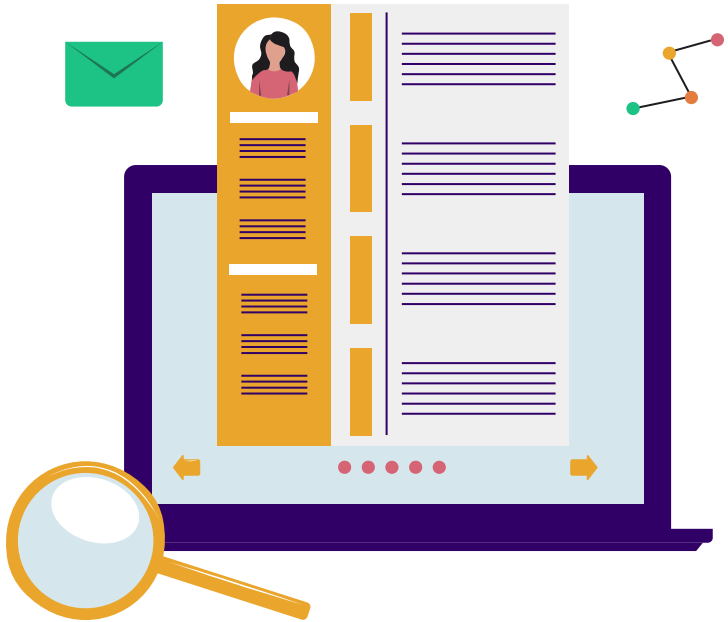


Talent Match Analysis

Analysis By Ari Sandi Permana

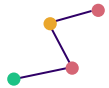
LinkedIn

Executive Summary

Brief Overview of the Project

This project aims to analyze employee competency and performance data to uncover the key factors that define high performing individuals. The study was conducted through three main steps: discovering success patterns from competency and psychometric data, defining a quantitative success formula to measure individual alignment, and generating AI driven job profiles based on top performer benchmarks. The analysis integrates SQL based data modeling, visualization, and Python automation to transform raw data into actionable insights. The final outcome provides a clear view of what drives success within the organization and how AI can be leveraged to build objective, data-driven role profiles for future talent strategies.

Objective



🎯 Objectives

- To identify the key competencies, behavioral traits, and cognitive factors that differentiate high-performing employees from others.
- To develop a measurable *Success Formula* that quantifies individual alignment with organizational success benchmarks.
- To leverage AI for generating automated job profiles based on proven performance data, enabling data-driven talent decisions.

Outcome

📊 Key Outcomes

- Discovered clear success patterns across competency pillars such as **Quality Delivery**, **Social Empathy**, and **Growth Development** that strongly correlate with high performance.
- Designed a *Final Match Rate* metric combining **TGV (competency)** and **TV (test value)** match scores, providing a standardized measure of employee fit.
- Developed an **AI-Generated Job Profile** module using Python that translates data insights into structured role definitions aligned with top performer attributes.

Impact

💡 Impact

- Provided a **data-driven framework** for identifying, assessing, and replicating success factors among employees.
- Enhanced **objectivity and consistency** in talent evaluation through measurable match rate calculations.
- Demonstrated how **AI and analytics** can streamline HR processes by transforming performance data into actionable insights for hiring, development, and succession planning.

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01

Pattern of Success

How Competency Pillar Drive High Performance

Pillar Vs Score

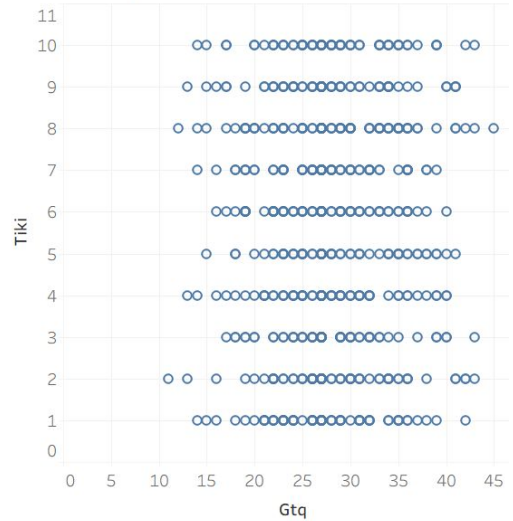
Pillar Label

Score	Commerci..	Curiosity ..	Forward T..	Growth D..	Insight & ..	Lead, Insp..	Quality D..	Social Em..	Synergy & ..	Value Cre..
1	286	289	305	288	275	283	315	284	293	283
2	485	496	501	522	503	500	481	469	486	496
3	671	663	650	633	680	633	631	681	631	644
4	643	630	614	636	641	660	617	631	648	645
5	723	709	718	700	708	693	723	720	711	700

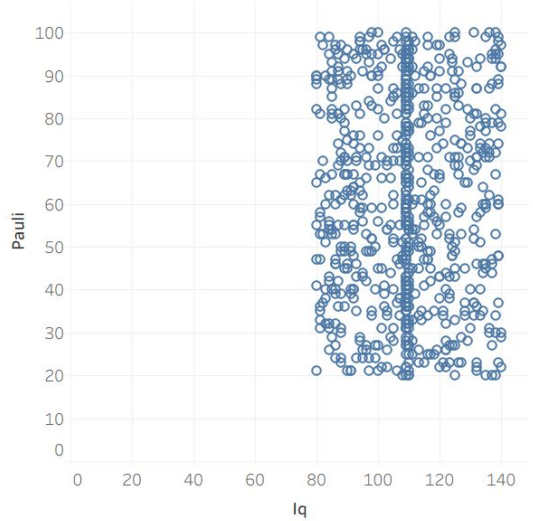
The heatmap shows a clear positive relationship between competency pillars and performance scores.
Employees with rating 5 consistently appear in higher counts across all pillars — especially in **Quality Delivery**, **Social Empathy**, **Forward Thinking**, and **Growth Development**.
This indicates that top performers succeed by combining **strong execution quality**, **collaboration**, and a **growth-oriented mindset**.

Cognitive Ability & Focus Area Key Driver

Tiki Vs Gtq

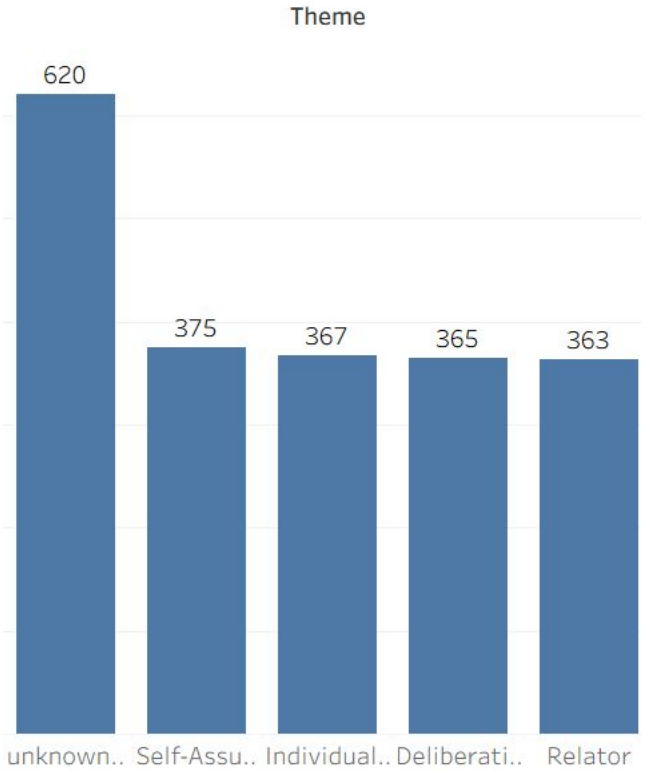


Pauli Vs Iq



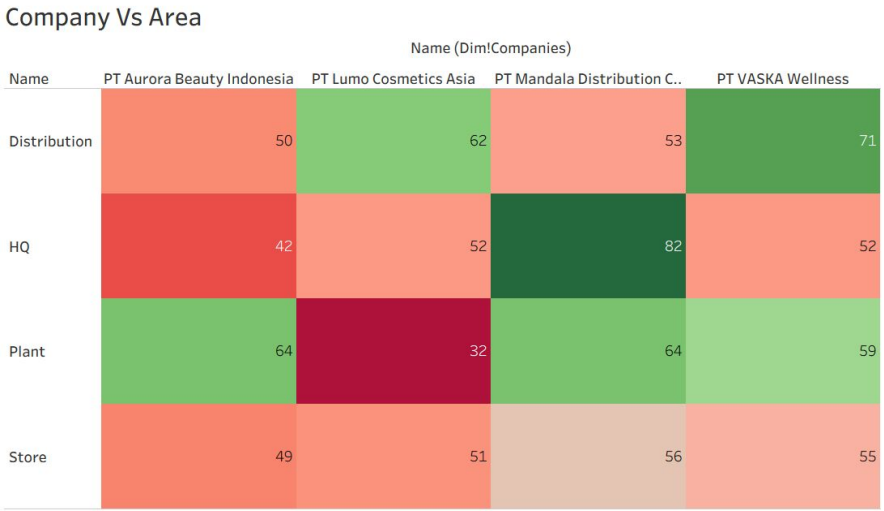
The scatter plots illustrate how employees with stronger **cognitive aptitude (GTQ, IQ)** also tend to achieve higher results in **attention and processing tasks (TIKI, Pauli)**.
This pattern highlights that **intellectual ability and sustained focus** move together, forming the foundation of high performance.
In other words, top performers combine **sharp reasoning, quick information processing, and strong mental stamina** to consistently deliver results.

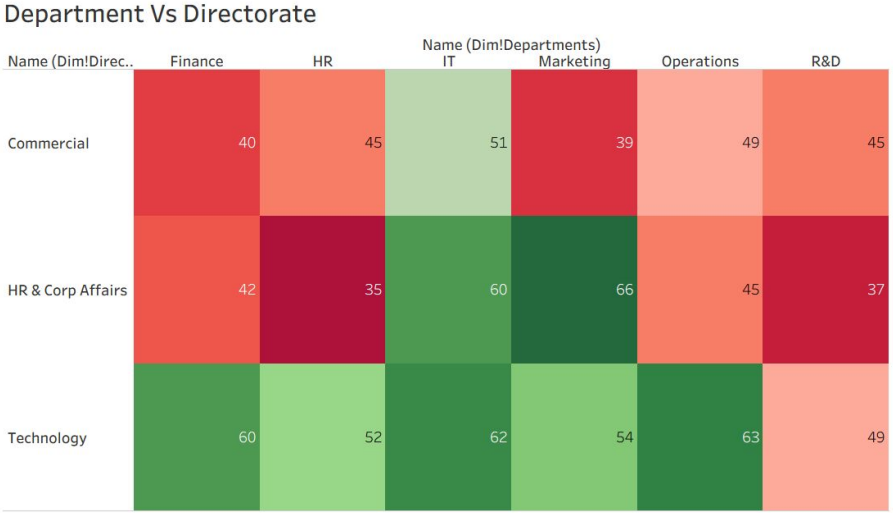
Strength Theme Reflect Confidence & Collaboration



The most common strength themes among employees are **Self-Assurance, Individualization, Deliberative**, and **Relator**, reflecting a workforce that values **confidence, thoughtful decision-making, and personal connection**.
However, a significant portion of records (≈620 entries) fall under **“Unknown”**, indicating **missing or unclassified strength data**.
This suggests that while key themes show a clear behavioral pattern, **improving data completeness** will help reveal a more accurate view of organizational strengths.

Where Talent is Concentrated



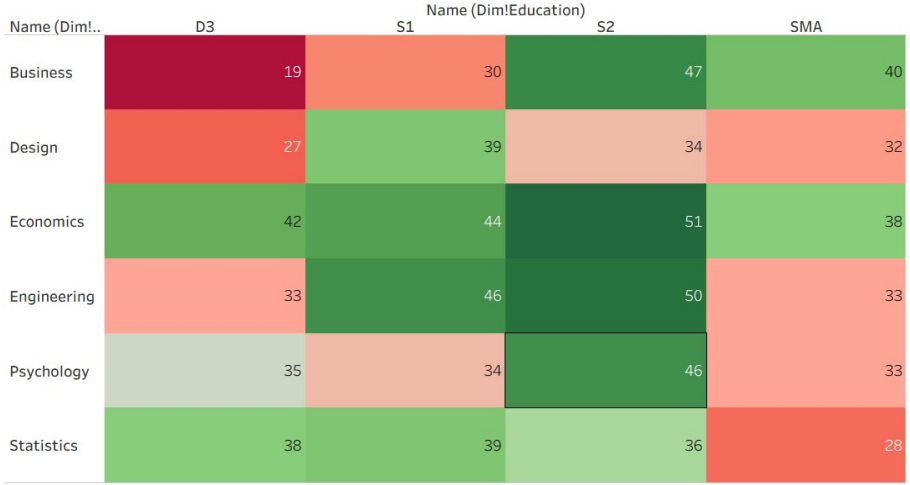


The heatmaps show that employee distribution varies across company areas and departments.
HQ and Plant areas have the highest concentration of employees, suggesting these functions are the company's main operational and strategic hubs.
Within departments, **Technology** and **HR & Corporate Affairs** show stronger clusters across multiple directorates, reflecting their **cross-functional importance** and support for company-wide operations.

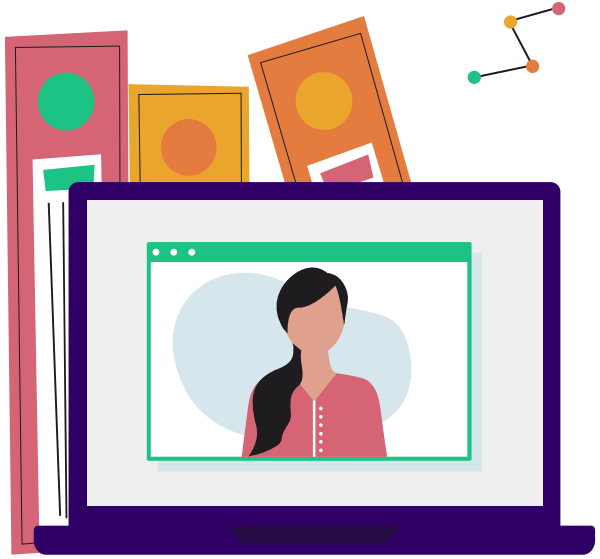
Where Talent is Concentrated

Division Vs Grade

Education Vs Major



The heatmaps show that most employees come from **S1–S2 education levels**, mainly in **Economics, Engineering, and Business majors**, reflecting a workforce with strong academic backgrounds.
Across divisions, **Operations, Product Development, and Sales** have the most representation across grades, indicating that **core business and execution functions** dominate the company's talent structure.
This pattern suggests that high-performing roles often emerge from employees with **higher education and operational exposure**.



02

Logic SQL

🧠 Explanation of SQL Approach

The SQL logic was designed to combine multiple datasets — including **employee profiles, competency scores (TGV), and test values (TV)** — in order to calculate a measurable *Success Formula*.
The main goal was to quantify how closely each employee's competency and test performance aligned with the characteristics of high-performing employees.
To achieve this, SQL was used to:

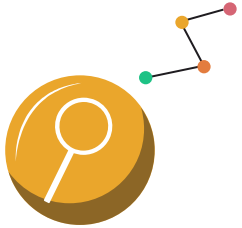
1. Join multiple data sources using **LEFT JOIN** for comprehensive data coverage.
2. Compute **baseline averages** for each competency pillar and test dimension using GROUP BY functions.
3. Compare each employee's score to the high-performer baseline through **percentage matching** logic.
4. Create a *Final Match Rate* metric that combines both **TGV Match Rate** and **TV Match Rate** using a simple average formula.

🧩 Query Structure and CTE Logic Overview

The analysis used a modular query design with **Common Table Expressions (CTEs)** to improve readability and maintainability.
Each CTE handled a specific part of the computation:

- **CTE #1 – `baseline_tgv`**: Calculated the average competency score for top performers (rating 5) per TGV pillar.
- **CTE #2 – `baseline_tv`**: Aggregated test dimension scores (TV) for the same top performers to form comparison benchmarks.
- **CTE #3 – `employee_match`**: Merged employee-level scores and calculated the percentage difference between the employee score and the top-performer baseline.
- **CTE #4 – `final_match_rate`**: Combined both TGV and TV match rates into a unified *Final Match Rate* score for each employee.

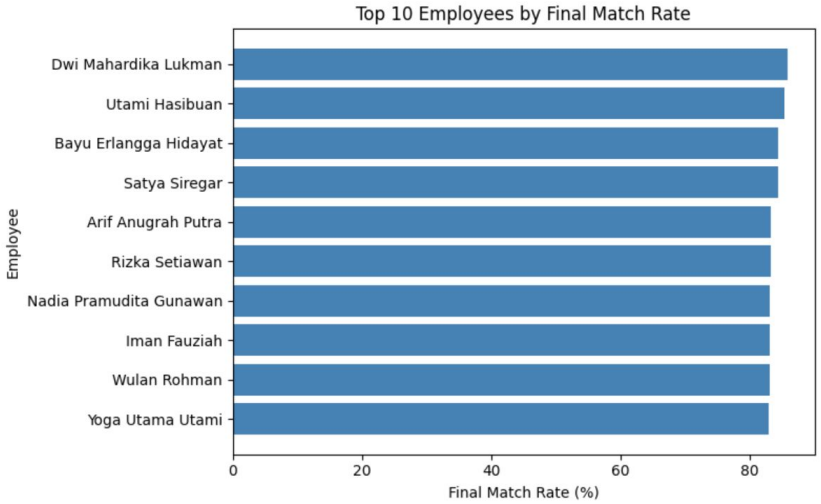
Success Formula Calculation

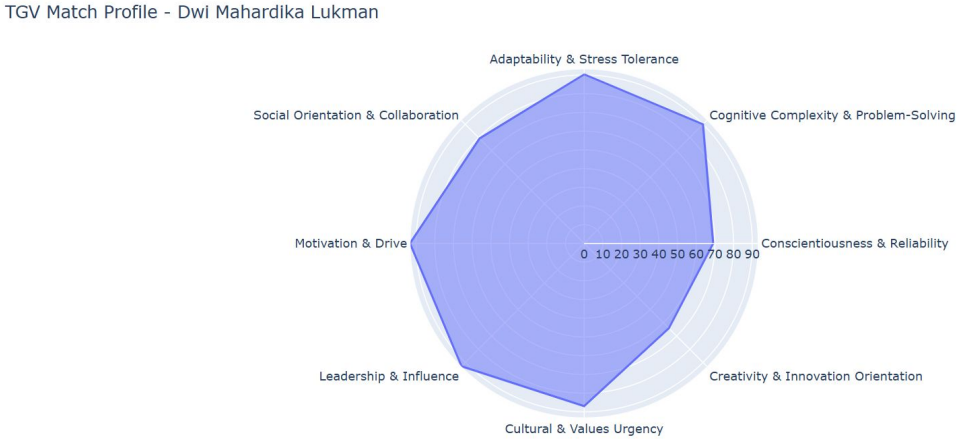


Row	employee_id	directorate	role	grade	tgv_name	tv_name	baseline_score	user_score	tv_match_rate	tgv_match_rate	final_match_rate
1	DUP1942	Commercial	Brand Executive	IV	Adaptability & Stress Tolerance	papi_t	4.56	9	53.56	68.02	68.52
2	DUP1942	Commercial	Brand Executive	IV	Creativity & Innovation Orientation	ideation	3.05	3	99.38	75.81	68.52
3	DUP1942	Commercial	Brand Executive	IV	*null*	papi_b	4.52	0	52.52	*null*	68.52
4	DUP1942	Commercial	Brand Executive	IV	Leadership & Influence	papi_p	4.68	5	96.69	91.35	68.52

The success formula combines **TGV match rate** (competency) and **TV match rate** (test value) to generate a **final match score** per employee.
Each individual's performance is benchmarked against baseline scores, producing a standardized percentage of fit.
For example, employee **DUP1942** scored **68.52%**, indicating strong alignment with company success factors, especially in **Leadership & Influence** and **Adaptability** pillars.

Benchmarking Top Performance

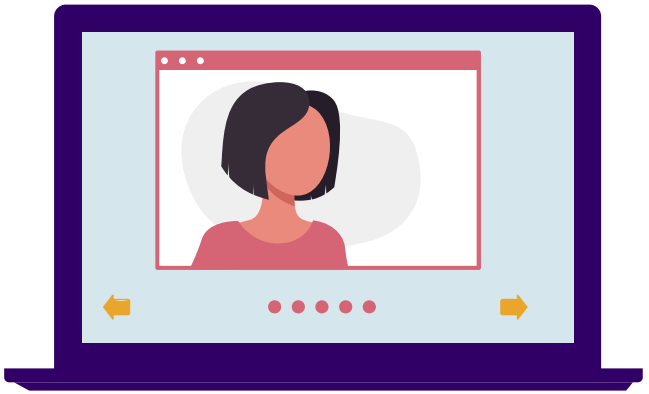




The benchmark data identifies top performers based on Final Match Rate.
Their competency profiles serve as the foundation for generating the AI Job Profile in the next step.
This ensures that the resulting role definition is grounded in proven performance behavior.

03

Built AI Talent Dashboard



AI Generated Job Profile

🎯 AI-Generated Job Profile

Role Name: Data Analyst
Job Level: Middle
Role Purpose: Transform complex datasets into actionable insights that support business decision-making.

🧠 Key Job Requirements

- Strong analytical and SQL querying skills
- Proficiency in Python for data cleaning, analysis, and visualization
- Experience with BI tools such as Tableau or Power BI
- Understanding of data storytelling and translating insights for business impact
- Effective communication with both technical and non-technical stakeholders
- Ability to manage and interpret large datasets accurately

💪 Core Competencies

Based on high-performing employee benchmarks, success in this role is driven by:

- Cognitive & Problem-Solving, Collaboration & Teamwork, Strategic Thinking
- Continuous Learning
- Decision-Making Agility

🚀 Behavioral Traits of Top Performers

- Curious and data-driven mindset
- Proactive and collaborative in team environments
- Resilient under tight deadlines
- Detail-oriented yet able to see the big picture
- Adaptable to changing business priorities

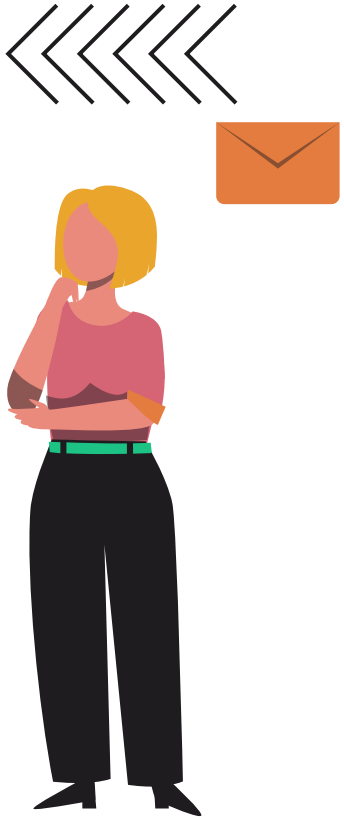
🏁 Summary

Top performers in this role combine **technical depth** (analytics and data modeling) with **business understanding**.
They excel not just in data manipulation, but in using insights to influence decisions and improve organizational outcomes.

This profile was automatically generated from benchmark data of high-performing employees.
It outlines the key competencies, skills, and behavioral traits most associated with success in this role.
The result ensures that hiring and development criteria are aligned with proven performance patterns.

Conclusion

04



Reflections

Throughout this project, I learned how data analytics can be applied to understand and define what makes employees successful in a measurable and objective way. By combining performance ratings, competency data, and AI-based text generation, I was able to translate complex HR concepts into actionable insights. This process strengthened my understanding of how data storytelling, statistical reasoning, and automation can work together to support evidence-based decision-making in talent management.

Challenges

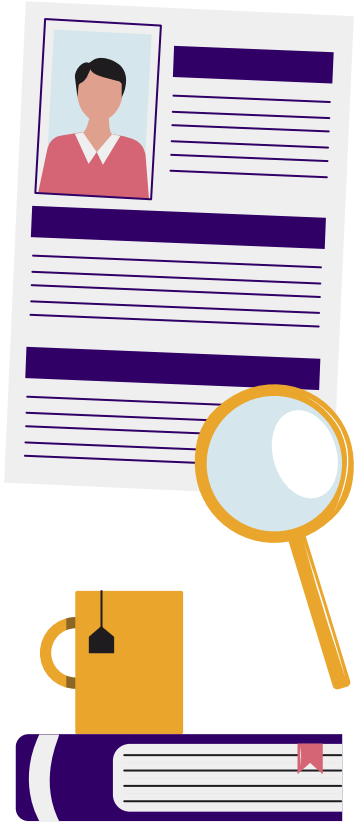
One of the main challenges was managing data quality issues such as missing or inconsistent values across multiple datasets. Aligning various data sources including competencies, psychometric tests, and performance results required careful validation to maintain analytical integrity. Additionally, balancing exploratory visualization and SQL-based logic design was technically demanding, especially when ensuring that the final success formula produced interpretable and reliable outcomes.

Improvement Ideas

If this project were to be extended, I would enhance the model by incorporating more behavioral and contextual variables, such as employee engagement or leadership impact metrics. The dashboard could also be expanded into an interactive platform using Tableau or Power BI for real time monitoring and benchmarking. Lastly, integrating NLP based clustering or AI driven segmentation could uncover deeper patterns of success, allowing the organization to optimize talent placement and succession planning more effectively.

Appendix

SQL Colaboratory



THANKS!

DO YOU HAVE ANY QUESTIONS?

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