

Analisis Kinerja Pegawai berdasarkan Hasil Training

Ratih Malini





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Education

*S1 Sistem Informasi – Universitas Indonesia
2008 – 2012*

Working

*BKB Nurul Fikri 2010 – 2020
BKPSDM Kota Serang 2021 – Saat ini*


On the left side of the slide, there are three overlapping parallelogram shapes. The top one is black, the middle one is a light orange, and the bottom one is a darker orange. They are all slanted to the right.

Project Background

Project Background

Proyek ini bertujuan untuk melakukan analisis terkait *Key Performance Indicator* (KPI) pegawai di setiap departemen dengan salah satu faktor yang mempengaruhinya.

Dataset diproses dengan metode *Batch Processing* menggunakan Apache Airflow dan Spark. Untuk analisis lebih lanjut, dilakukan visualisasi data dengan menggunakan Metabase.

A large black parallelogram on the left side of the slide, with two overlapping orange parallelograms in front of it, one slightly to the right and down from the other.

Problem Statement

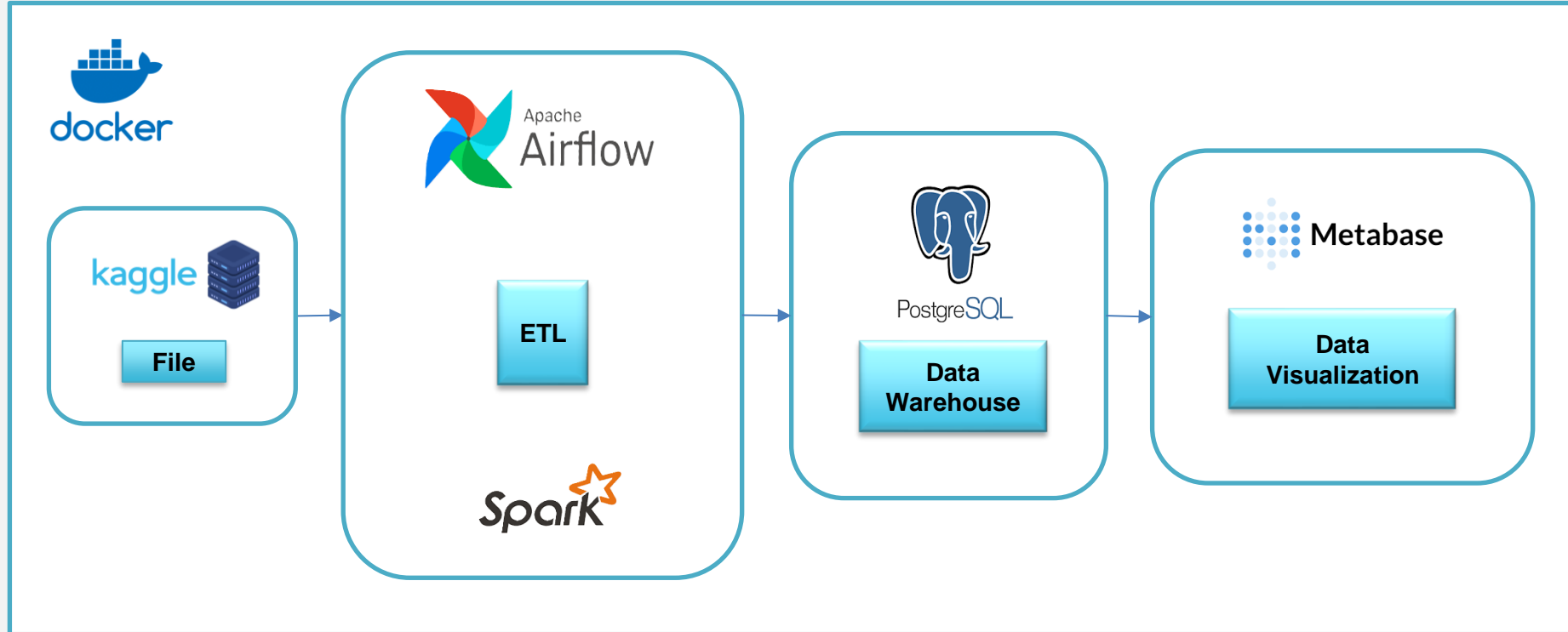
Problem Statement

- Hasil Training yang rendah di beberapa departemen.
- Nilai KPI yang rendah di beberapa departemen
- Apakah keduanya saling mempengaruhi?


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Data Platform Understanding

Data Platform Understanding



Data Platform Understanding



+

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Employee's Perfor...

Employee's Perfor...

kaggle.com/datasets/sanjanchaudhari/employees-performance-for-hr-analytics

Search

81

Code

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Employee's Performance for HR Analytics

Data Card Code (17) Discussion (3) Suggestions (0)

Uncleaned_employees_final_dataset (1).csv (1.14 MB)

Detail

Compact

Column

10 of 13 columns

About this file

Suggest Edits

This file does not have a description yet.

employee_id	department	region	education	gender	recruit
3	Sales & Marketing	region_2	Bachelors	m	other
8724	Operations	region_22	Masters & above	f	sourcing
74439	Other (8435)	Other (11509)	Other (1057)		Other (31)
72255	Technology	region_26	Bachelors	m	sourcing
	HR	region_4	Bachelors	f	other
	Sales & Marketing	region_13	Bachelors	m	other

Data Explorer

1.14 MB

Uncleaned_employees_final_c

Summary

1 file

13 columns

Data Platform Understanding



Containers [Give feedback](#)

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Container CPU usage ⓘ

4.95% / 800% (8 CPUs available)

Container memory usage ⓘ

2.02GB / 3.63GB

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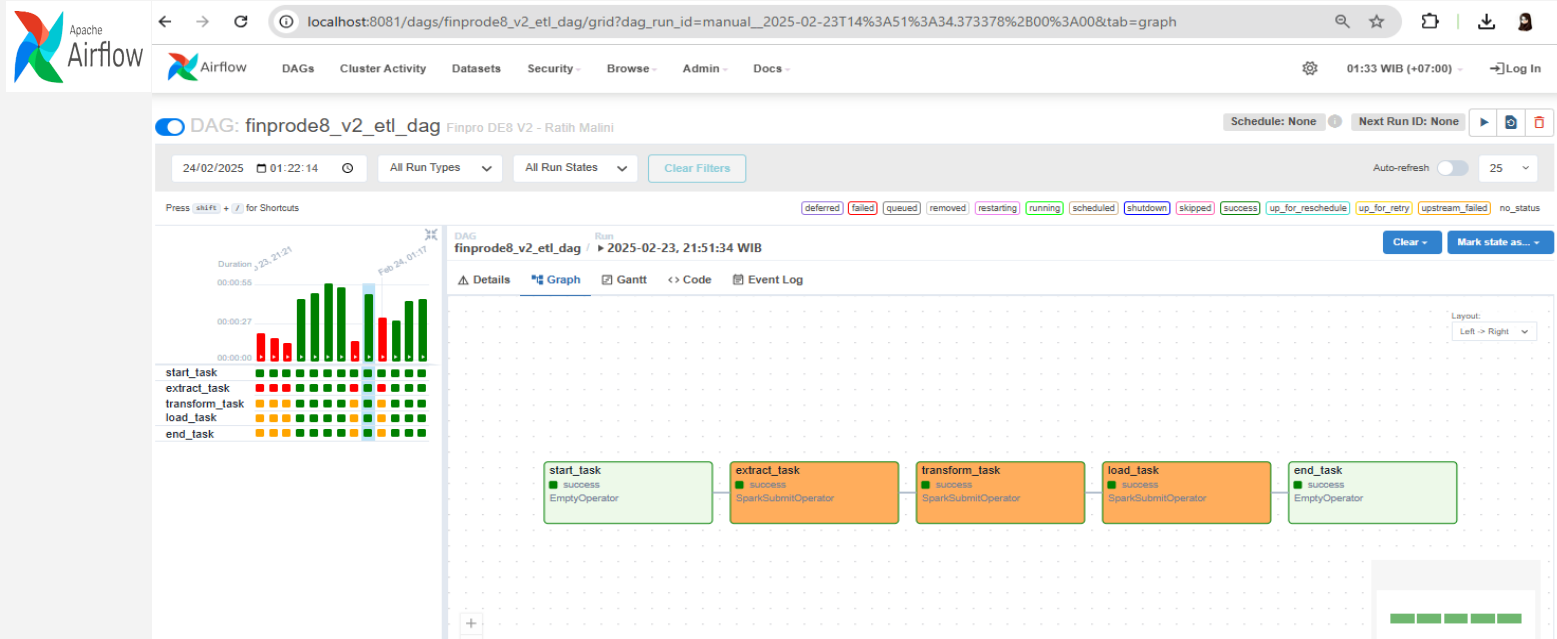


☒ Only show running containers

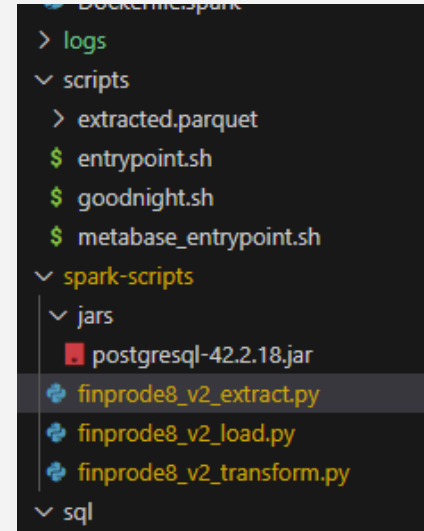
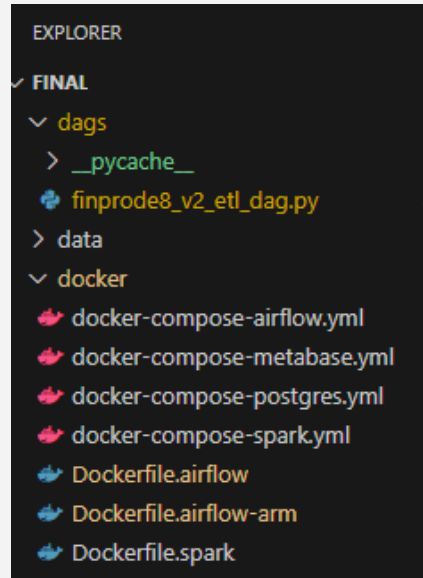
	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
●	finprobe8-po:	57c803c61e08	postgres:11	5433:5432	1.17%	4 hours ago	
●	finprobe8_me	92d0b52e3c90	metabase/metabase:v0.47.3	3001:3000	0.33%	4 hours ago	
●	finprobe8-rati	13789cf81cd7	finprobe8-ratih/spark	7077:7077 Show all ports (2)	0.15%	4 hours ago	
●	finprobe8-sp:	c832bf6654f2	finprobe8-ratih/spark		0.13%	4 hours ago	
●	finprobe8-air1	168c3979a09e	finprobe8-ratih/airflow		2.92%	4 hours ago	
●	finprobe8-air1	cb8ad0311cd7	finprobe8-ratih/airflow	8081:8080	0.25%	4 hours ago	

Showing 7 items

Data Platform Understanding



Data Platform Understanding



Data Platform Understanding



ock-compose-metabase.yml ock-compose-postgres.yml .env employees X ock-compose-airflow.yml Docker

127.0.0.1@3303 8.2.0
127.0.0.1@5433 11.16 (Debian 11.16...)

postgres
postgres_db
warehouse
public
Query
Tables (2)
employees 17415

Columns
employee_id integer
department text
region text
education text
gender text
recruitment_channel text
no_of_trainings integer
age integer
previous_year_rating integer
length_of_service integer
KPIs_met_more_than_80 in...
awards_won integer
avg_training_score integer
Index
Triggers

Properties DATA Log ER Monitor

SELECT * FROM employees LIMIT 100

Search Results Export Cost: 6ms 1 2 3 4 ... 175 > Total 17415

	employee_id integer	department text	region text	education text	gender text	recruitment_channel text	no_of_trainings integer
	3	Procurement	region_22	Masters & above	f	other	1
	6	Sales & Marketing	region_15	Bachelors	f	other	1
	11	Technology	region_4	Masters & above	f	sourcing	1
	13	Sales & Marketing	region_17	Bachelors	m	other	1
	16	Sales & Marketing	region_4	Masters & above	m	sourcing	1
	17	Sales & Marketing	region_7	Bachelors	m	sourcing	1
	19	HR	region_2	Masters & above	f	other	1
	20	Analytics	region_21	Bachelors	m	sourcing	1
	21	Analytics	region_8	Bachelors	m	sourcing	2
	22	Technology	region_2	Masters & above	f	other	1
	23	Sales & Marketing	region_16	Bachelors	f	sourcing	1
	24	HR	region_28	Masters & above	f	other	1
	27	Sales & Marketing	region_16	Bachelors	m	sourcing	1

Data Platform Understanding

Metabase

localhost:3001/question#eyJkYXRhc2V0X3F1ZXJ5Jlp7ImRhdGFYXNljoYLCjxdWVyeS16eyJzb3VyY2UtdGFibGUiOjEwSwidHlwZSI6InF1ZXJ5In0lmRpc3BsYX...

Search...

+ New

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DATA

- Browse data

finprode8 / Employees

Filter Summarize

Employee ID	Department	Region	Education	Gender	Recruitment Channel	No Of Trainings	Age	Previous Year Rating	Length Of Service
3	Procurement	region_22	Masters & above	f	other	1	38	5	4
6	Sales & Marketing	region_15	Bachelors	f	other	1	38	3	10
11	Technology	region_4	Masters & above	f	sourcing	1	39	4	12
13	Sales & Marketing	region_17	Bachelors	m	other	1	38	1	5
16	Sales & Marketing	region_4	Masters & above	m	sourcing	1	40	5	5
17	Sales & Marketing	region_7	Bachelors	m	sourcing	1	50	5	13
19	HR	region_2	Masters & above	f	other	1	50	4	7
20	Analytics	region_21	Bachelors	m	sourcing	1	27	0	1
21	Analytics	region_8	Bachelors	m	sourcing	2	28	2	3
22	Technology	region_2	Masters & above	f	other	1	57	4	18
23	Sales & Marketing	region_16	Bachelors	f	sourcing	1	42	1	3
24	HR	region_28	Masters & above	f	other	1	32	1	5
27	Sales & Marketing	region_16	Bachelors	m	sourcing	1	29	2	6
29	Analytics	region_7	Bachelors	m	other	1	28	0	1
31	Sales & Marketing	region_15	Bachelors	f	other	1	29	3	5
40	Operations	region_7	Masters & above	f	other	1	34	1	4

Abstract geometric shapes on the left side of the slide: a large black parallelogram, a medium yellow parallelogram, and a smaller orange parallelogram, all slanted to the right.

Data Understanding

Data Understanding

Sumber : <https://www.kaggle.com/datasets/sanjanchaudhari/employees-performance-for-hr-analytics/data>

Jenis Data : CSV

Kualitas Data :

- 13 kolom
- 17.417 baris
- Missing values pada kolom
 - education : 771
 - previous_year_rating : 1.363
- Duplikasi data

On the left side of the slide, there are three overlapping geometric shapes: a large black parallelogram at the top, a medium-sized light orange parallelogram in the middle, and a smaller dark orange parallelogram at the bottom, all slanted to the right.

Transformation & Consideration

Transformation & Consideration

Method :

- Batch Processing

Tool :

- Spark

Transformation :

- Missing values
- Duplikasi

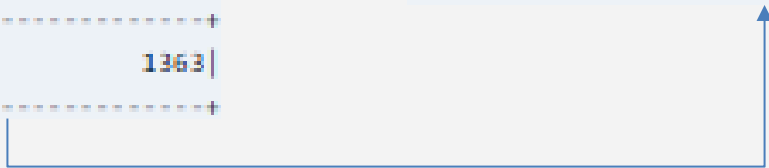
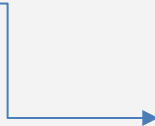
Transformation & Consideration

- Missing Values

```
+-----+
|education_null|
+-----+
|          771|
+-----+
```

```
+-----+
|previous_year_rating_null|
+-----+
|          1363|
+-----+
```

```
+-----+
|education_null|previous_year_rating_null|
+-----+
|          0|          0|
+-----+
```



Transformation & Consideration

– Duplikasi

Duplikat

Unik

employee_id	department	region	education	gender	recruitment_channel	no_of_trainings	age	previous_year_rating	length_of_service	KPIs_met_more_than_80	awards_won	avg_training_score
49584	HR	region_7	Bachelors	m	other	1	33	1	9	0	0	51
49584	HR	region_7	Bachelors	m	other	1	33	1	9	0	0	51
49584	HR	region_7	Bachelors	m	other	1	33	1	9	0	0	51
64573	Technology	region_7	Bachelors	f	referred	2	30	5	6	1	0	81
64573	HR	region_7	Bachelors	f	referred	1	35	5	4	1	0	81



employee_id	department	region	education	gender	recruitment_channel	no_of_trainings	age	previous_year_rating	length_of_service	KPIs_met_more_than_80	awards_won	avg_training_score
49584	HR	region_7	Bachelors	m	other	1	33	1	9	0	0	51
64573	HR	region_7	Bachelors	f	referred	1	35	5	4	1	0	81
64573	Technology	region_7	Bachelors	f	referred	2	30	5	6	1	0	81

A large black parallelogram on the left side of the slide, with two overlapping orange parallelograms positioned below it, creating a modern, abstract design.

Data Modeling (Business)

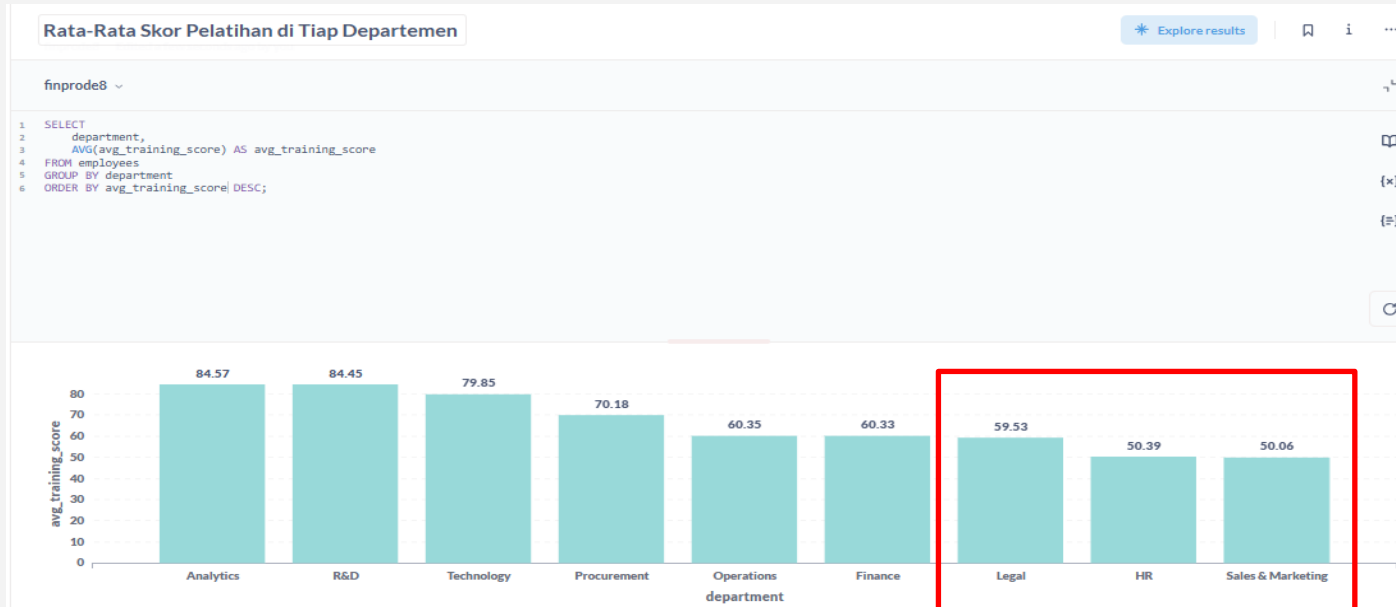
Data Modeling (Business)

Employees		
employee_id	int	PK
department	text	null
region	text	null
education	text	null
gender	text	null
recruitment_channel	text	null
no_of_trainings	int	null
age	int	null
previous_year_rating	int	null
length_of_service	int	null
KPIs_met_more_than	int	null
awards_won	int	null
avg_training_score	int	null

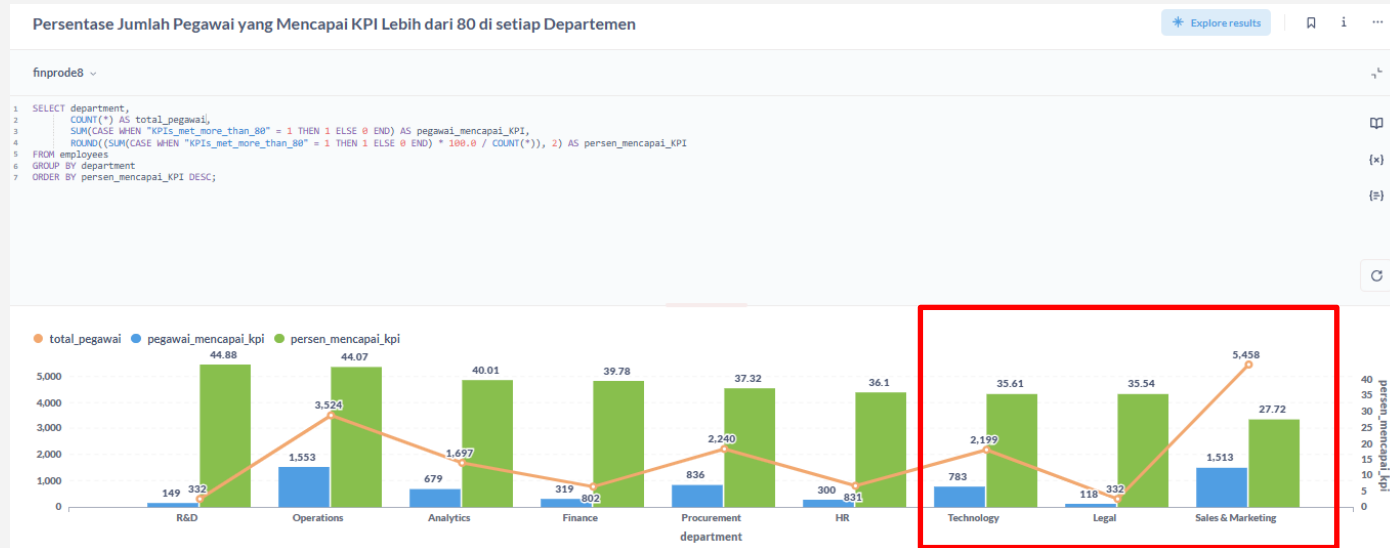
A large black parallelogram on the left side of the slide, with two overlapping orange parallelograms positioned below it, creating a modern, abstract design.

Data Visualization

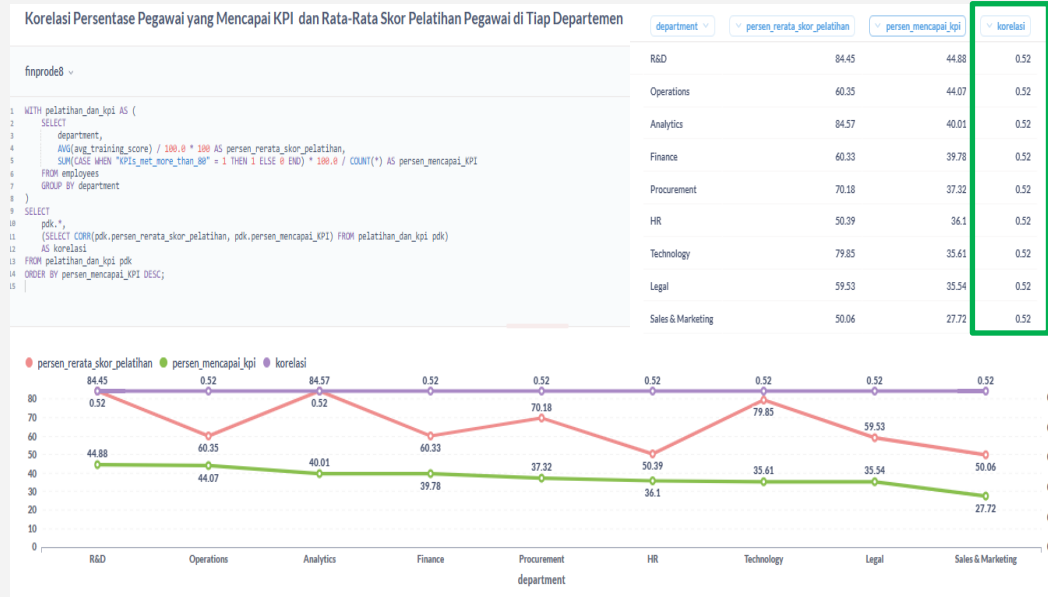
Data Visualization



Data Visualization



Data Visualization



Korelasi positif

Rata-Rata Skor Pelatihan mempengaruhi Pencapaian KPI, tapi tidak terlalu signifikan.

Decorative geometric shapes on the left side of the slide: a large black parallelogram, a light orange parallelogram, and a darker orange parallelogram, all slanted to the right.

Conclusion & Recommendation

Conclusion & Recommendation

Conclusion :

Platform pada projek ini mampu mengolah dan menyajikan data dengan baik dan menghasilkan analisis berupa visualisasi data sebagai berikut :

1. Departemen dengan rata-rata skor pelatihan terendah : *Legal, HR, Sales & Marketing*
2. Departemen dengan Persentase KPI terendah : *Technology, Legal, Sales & Marketing*
3. Adanya pengaruh yang tidak terlalu signifikan antara rata-rata skor pelatihan terhadap kenaikan KPI di setiap departemen.

Conclusion & Recommendation

Recommendation :

1. Evaluasi metode pelatihan dan hasilnya secara berkala.
2. Benchmarking dengan departemen yang memiliki nilai KPI tinggi.
3. Analisis terhadap faktor lain yang mungkin mempengaruhi kinerja.
4. Perluas analisis data dengan menggunakan *tools* visualisasi yang mendukung analisis lebih mendalam.

A large, stylized graphic on the left side of the slide. It consists of a blue outline of a person's head and shoulders. Inside the head is a large orange circle with a smaller orange circle in the center. Inside the shoulders is a large orange circle with a smaller orange circle in the center.

**Terima
Kasih.**