MEMBUKTIKAN KESETARAAN GENDER DALAM GAME ONLINE: IMPLEMENTASI DATA ENGINEERING DAN VISUALISASI PENCAPAIAN

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Latar Belakang

Dalam dunia game online, masih ada stereotip dan stigma yang cukup kuat terhadap pemain perempuan. Banyak konten di media sosial, termasuk TikTok, menunjukkan komentar dan pandangan merendahkan terhadap perempuan yang bermain game, sering kali dianggap sebagai "beban" dalam tim. Namun, apakah benar bahwa perempuan tidak dapat mencapai pencapaian yang sama dengan laki-laki dalam game? Ataukah ini hanya masalah waktu dan kesempatan yang setara?

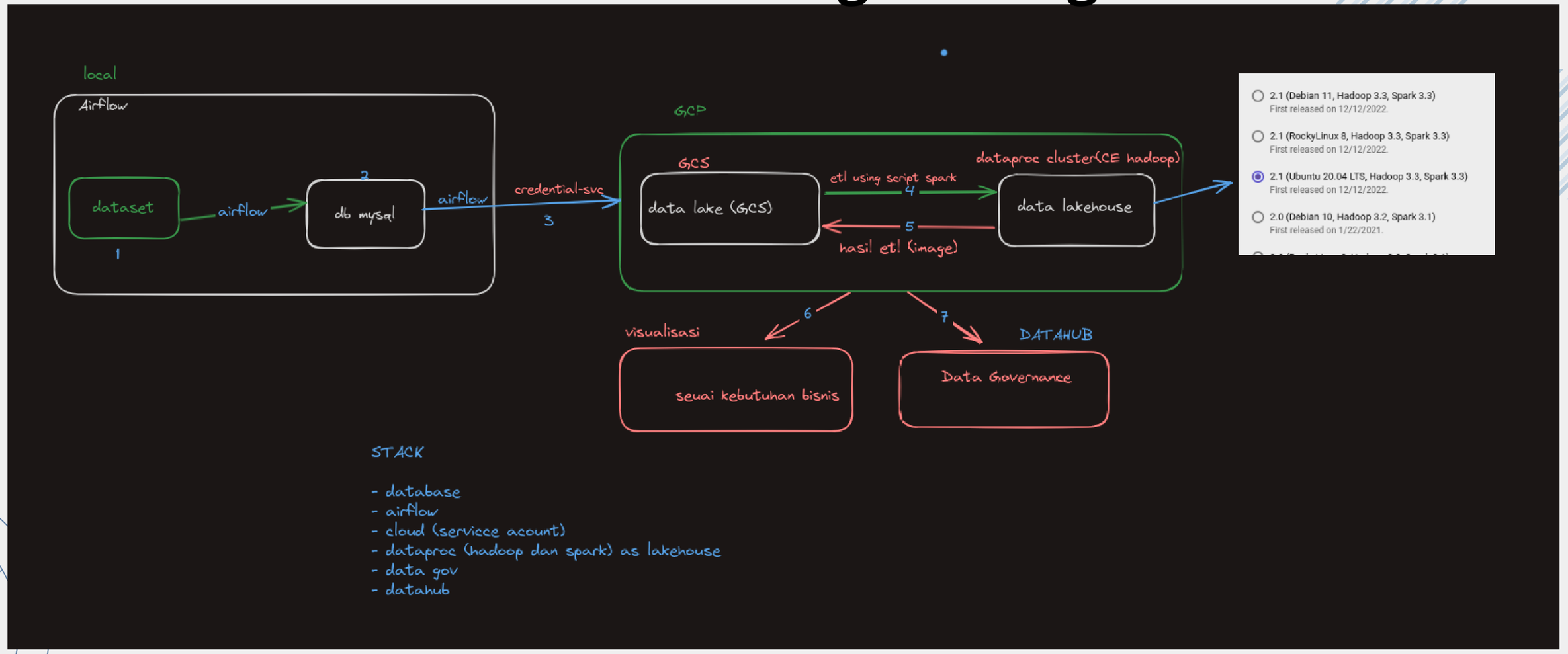
Hal tersebut menjadi dasar reserach ini dilakukan, dan satu hal menarik lainya ini dilakukan dengan metoda data enginering untuk mengolah datanya

DATA

```
[4] df.head(30)
```

	PlayerID	Age	Gender	Location	GameGenre	PlayTimeHours	InGamePurchases	GameDifficulty	SessionsPerWeek	AvgSessionDurationMinutes	PlayerLevel	AchievementsUnlocked	EngagementLevel
0	9000	43	Male	Other	Strategy	16.271119	0	Medium	6	108	79	25	Medium
1	9001	29	Female	USA	Strategy	5.525961	0	Medium	5	144	11	10	Medium
2	9002	22	Female	USA	Sports	8.223755	0	Easy	16	142	35	41	High
3	9003	35	Male	USA	Action	5.265351	1	Easy	9	85	57	47	Medium
4	9004	33	Male	Europe	Action	15.531945	0	Medium	2	131	95	37	Medium
5	9005	37	Male	Europe	RPG	20.561855	0	Easy	2	81	74	22	Low
6	9006	25	Male	USA	Action	9.752716	0	Hard	1	50	13	2	Low
7	9007	25	Female	Asia	RPG	4.401729	0	Medium	10	48	27	23	Medium
8	9008	38	Female	Europe	Simulation	18.152733	0	Easy	5	101	23	41	Medium
9	9009	38	Female	Other	Sports	23.942772	0	Easy	13	95	99	36	High
10	9010	17	Male	USA	Strategy	4.829916	0	Hard	8	95	14	12	High
11	9011	36	Female	Asia	Simulation	5.535981	1	Easy	16	124	62	31	High
12	9012	16	Male	USA	Sports	18.776234	1	Easy	9	18	52	32	High
13	9013	38	Female	USA	Strategy	8.701959	0	Easy	0	156	33	47	Low
14	9014	44	Male	USA	Simulation	17.975200	0	Easy	8	41	98	1	Low
15	9015	16	Male	Europe	RPG	7.951511	0	Medium	10	156	58	24	High
16	9016	35	Male	Asia	Strategy	17.887898	0	Easy	16	154	62	4	High
17	9017	47	Male	USA	RPG	17.272113	0	Medium	2	131	13	9	Low
18	9018	26	Female	Asia	Action	19.416079	0	Easy	3	135	77	25	Medium
19	9019	36	Female	Asia	RPG	19.338826	0	Easy	4	56	21	30	Low
20	9020	39	Female	USA	Sports	1.722581	0	Easy	2	177	34	37	Medium
21	9021	41	Female	USA	Sports	16.167690	0	Easy	18	159	36	33	High
22	9022	42	Male	USA	Sports	10.448126	0	Medium	2	120	81	5	Low
23	9023	30	Male	Europe	Strategy	17.959835	0	Easy	14	117	40	19	High
24	9024	29	Male	Europe	Sports	22.564723	0	Medium	12	161	1	22	High
25	9025	17	Female	USA	Sports	10.311460	0	Hard	4	82	1	7	Medium
26	9026	21	Male	USA	Strategy	4.898342	0	Medium	12	118	71	26	High

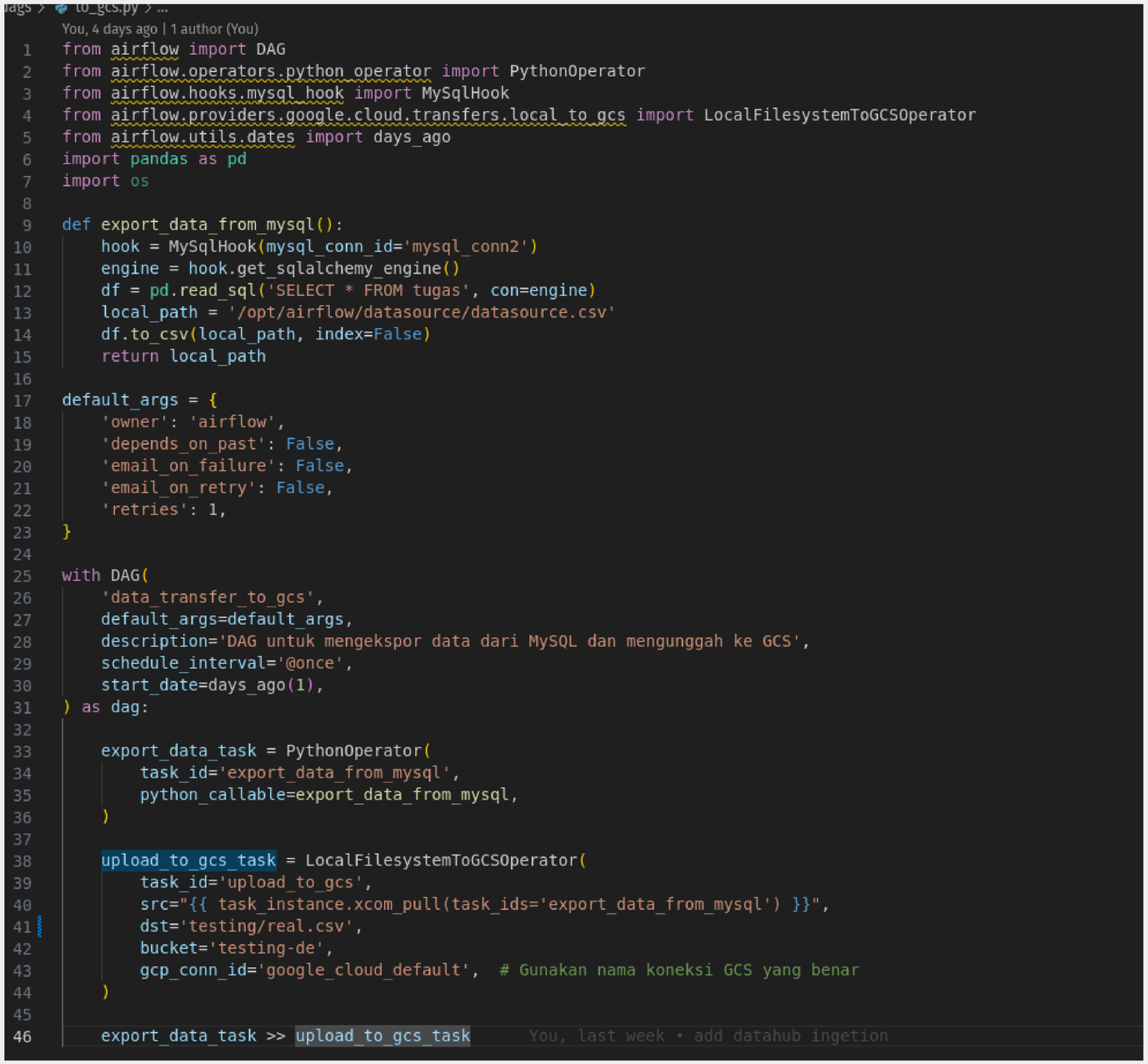
Flow Data engineering



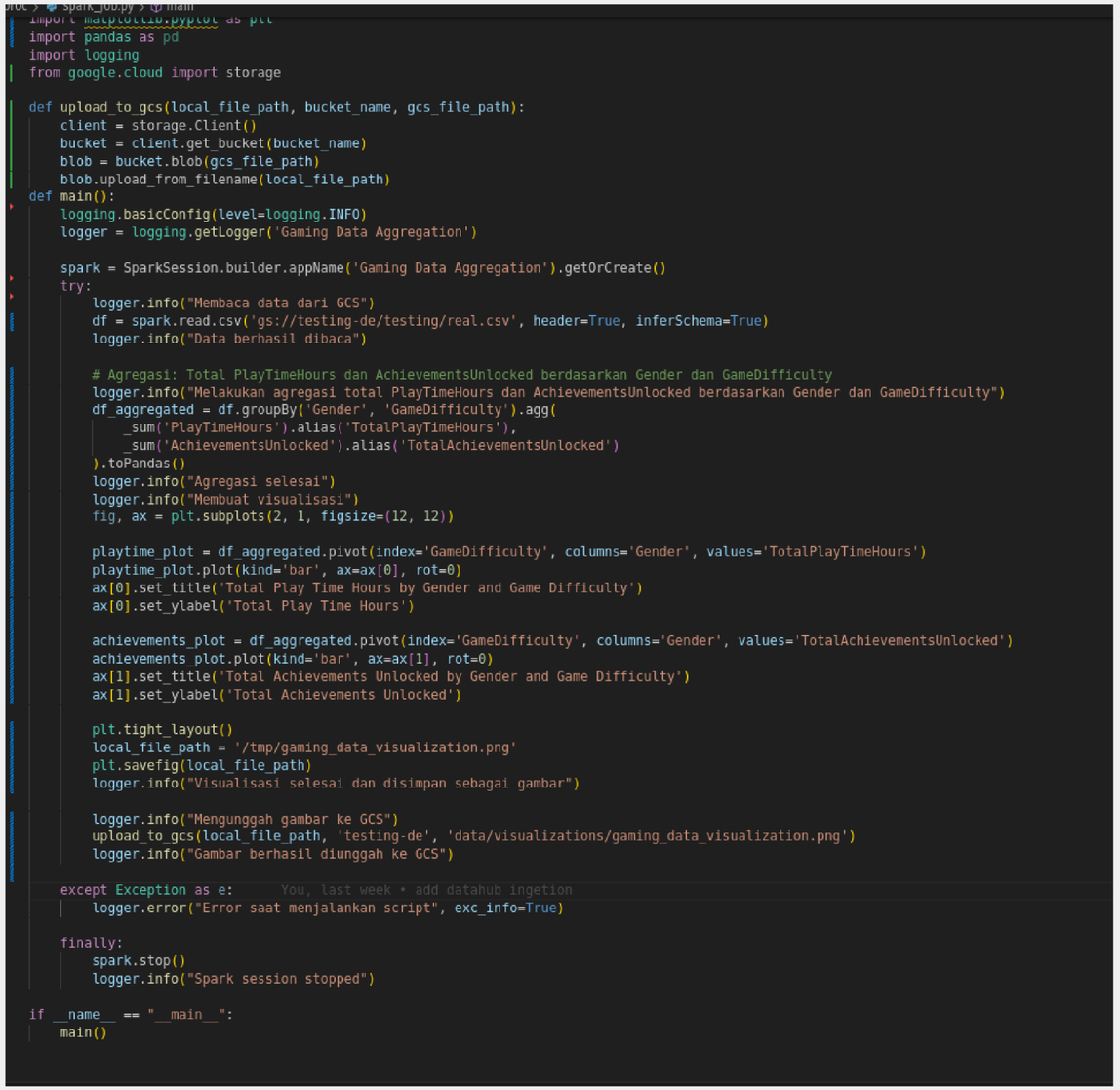
Dataset to Mysql

```
You, last week | 1 author (You)
from datetime import datetime
from airflow import DAG
from airflow.operators.python_operator import PythonOperator
from airflow.hooks.mysql_hook import MySqlHook
from airflow.utils.dates import days_ago
import pandas as pd
from sqlalchemy import create_engine

def load_data_to_mysql():
    # conections
    hook = MySqlHook(mysql_conn_id='mysql_conn2')
    engine = create_engine(hook.get_uri())
    #read data
    df = pd.read_csv('/opt/airflow/csv/online_gaming_behavior_dataset.csv')
    df.to_sql('tugas', con=engine, if_exists='replace', index=False)

dag = DAG(
    'data_transfer_to_mysql',
    default_args={      You, 2 weeks ago • Initial commit without credentials
        'owner': 'airflow',
        'depends_on_past': False,
        'email_on_failure': False,
        'email_on_retry': False,
        'retries': 1,
    },
    description='A simple DAG to transfer data to MySQL',
    schedule_interval='0 17 * * *',
    start_date=datetime.today()
)

transfer_data = PythonOperator(
    task_id='load_data_to_mysql',
    python_callable=load_data_to_mysql,
    dag=dag,
)

transfer_data
```

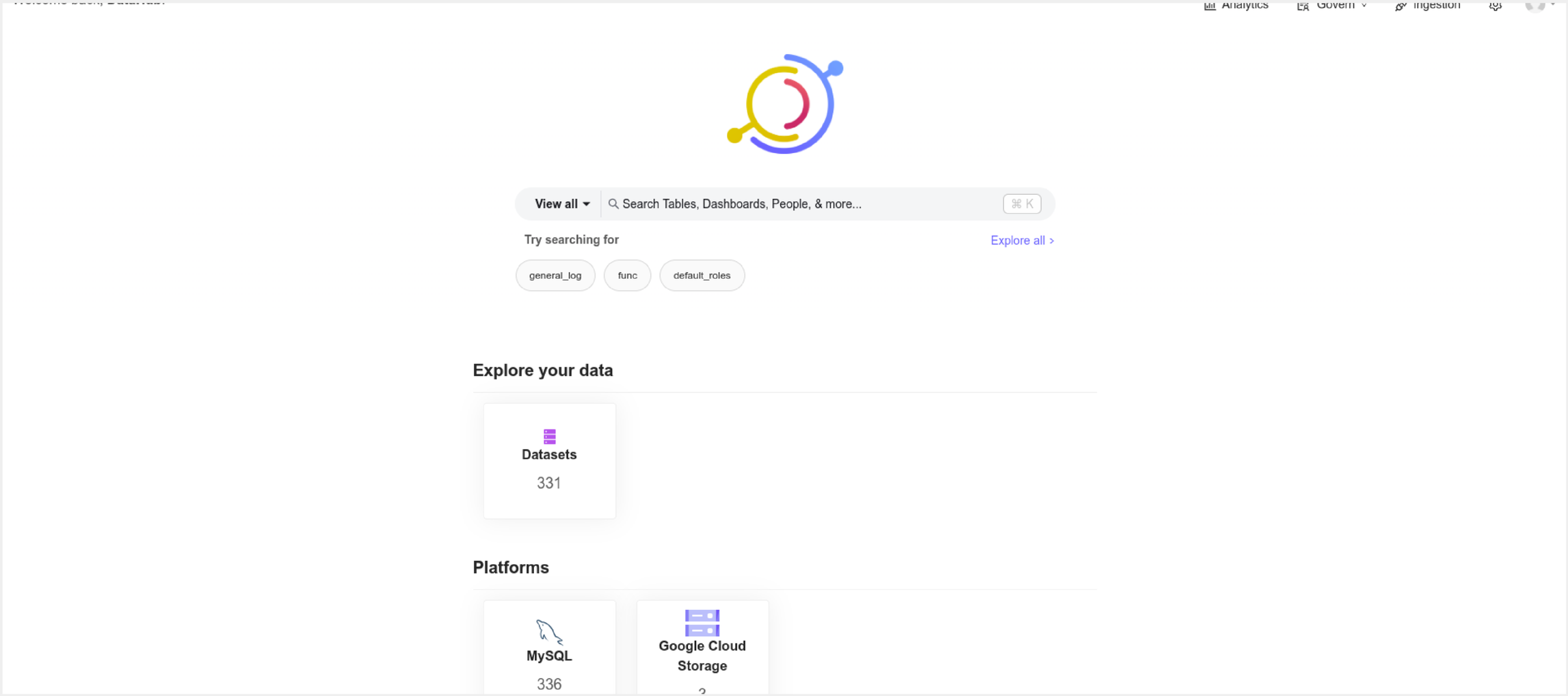
mysql To GCS

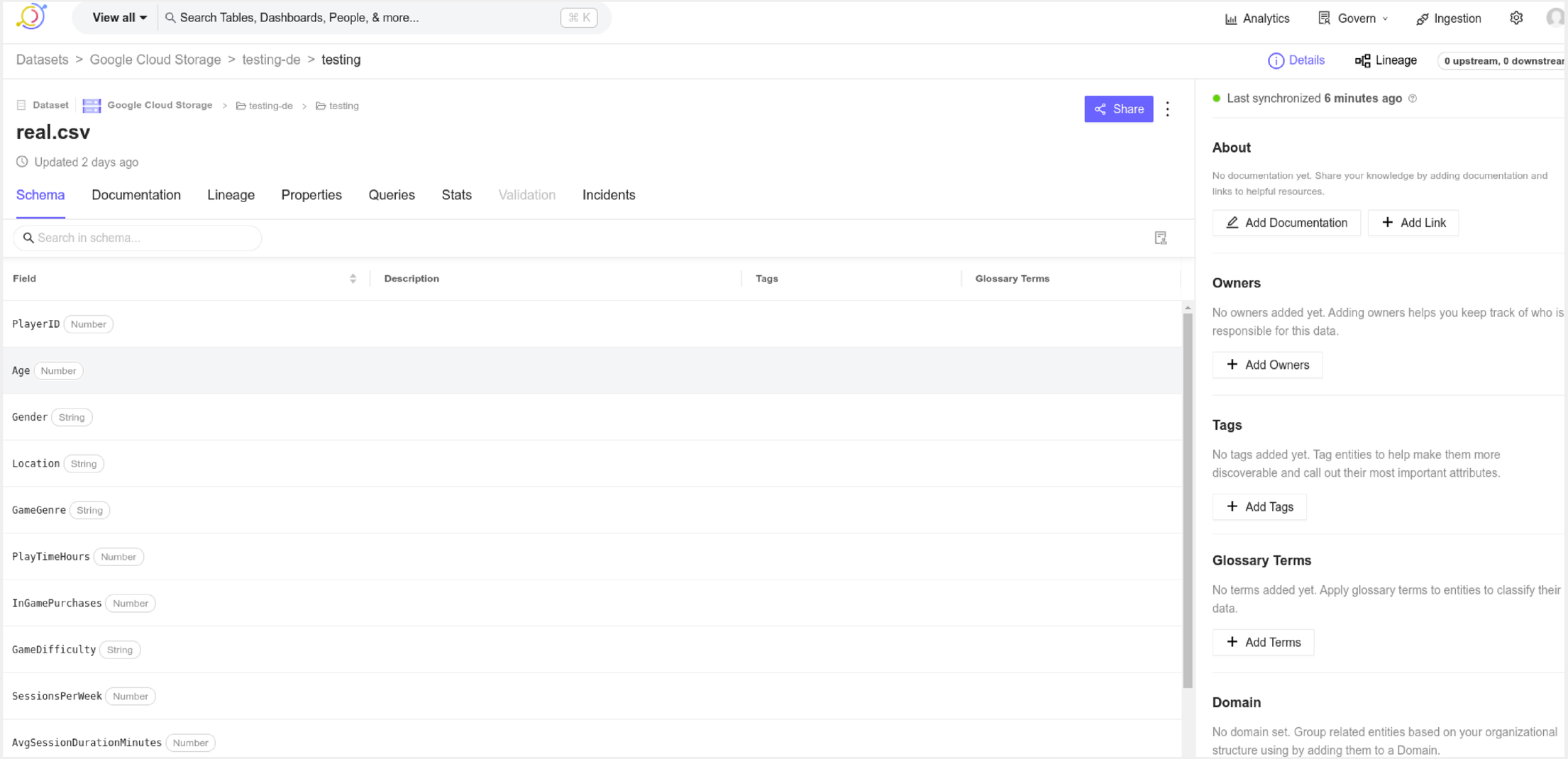

dags > to_gcs.py > ...
You, 4 days ago | 1 author (You)
from airflow import DAG
from airflow.operators.python_operator import PythonOperator
from airflow.hooks.mysql_hook import MySqlHook
from airflow.providers.google.cloud.transfers.local_to_gcs import LocalFilesystemToGCSOperator
from airflow.utils.dates import days_ago
import pandas as pd
import os
def export_data_from_mysql():
hook = MySqlHook(mysql_conn_id='mysql_conn2')
engine = hook.get_sqlalchemy_engine()
df = pd.read_sql('SELECT * FROM tugas', con=engine)
local_path = '/opt/airflow/datasource/datasource.csv'
df.to_csv(local_path, index=False)
return local_path
default_args = {
'owner': 'airflow',
'depends_on_past': False,
'email_on_failure': False,
'email_on_retry': False,
'retries': 1,
}
with DAG(
'data_transfer_to_gcs',
default_args=default_args,
description='DAG untuk mengekspor data dari MySQL dan mengunggah ke GCS',
schedule_interval='@once',
start_date=days_ago(1),
) as dag:
export_data_task = PythonOperator(
task_id='export_data_from_mysql',
python_callable=export_data_from_mysql,
)
upload_to_gcs_task = LocalFilesystemToGCSOperator(
task_id='upload_to_gcs',
src="{{ task_instance.xcom_pull(task_ids='export_data_from_mysql') }}",
dst='testing/real.csv',
bucket='testing-de',
gcp_conn_id='google_cloud_default', # Gunakan nama koneksi GCS yang benar
)
export_data_task >> upload_to_gcs_task
You, last week • add datahub ingetion

script spark for dataproc dan visualisa



Ingest data


Analytics
Govern
Ingestion
View all
Search Tables, Dashboards, People, & more...
⌘ K
Try searching for
Explore all >
general_log
func
default_roles
Explore your data
Datasets
331
Platforms
MySQL
336
Google Cloud Storage


View all
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Analytics
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Datasets > Google Cloud Storage > testing-de > testing
Details
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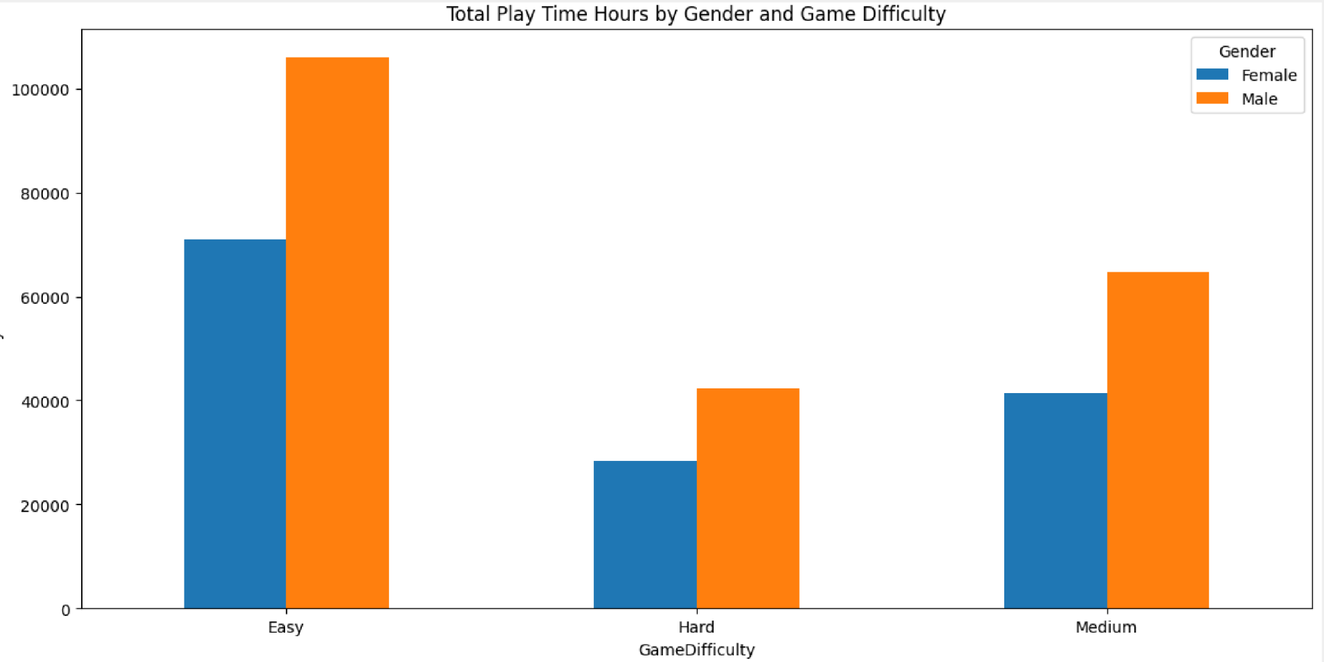
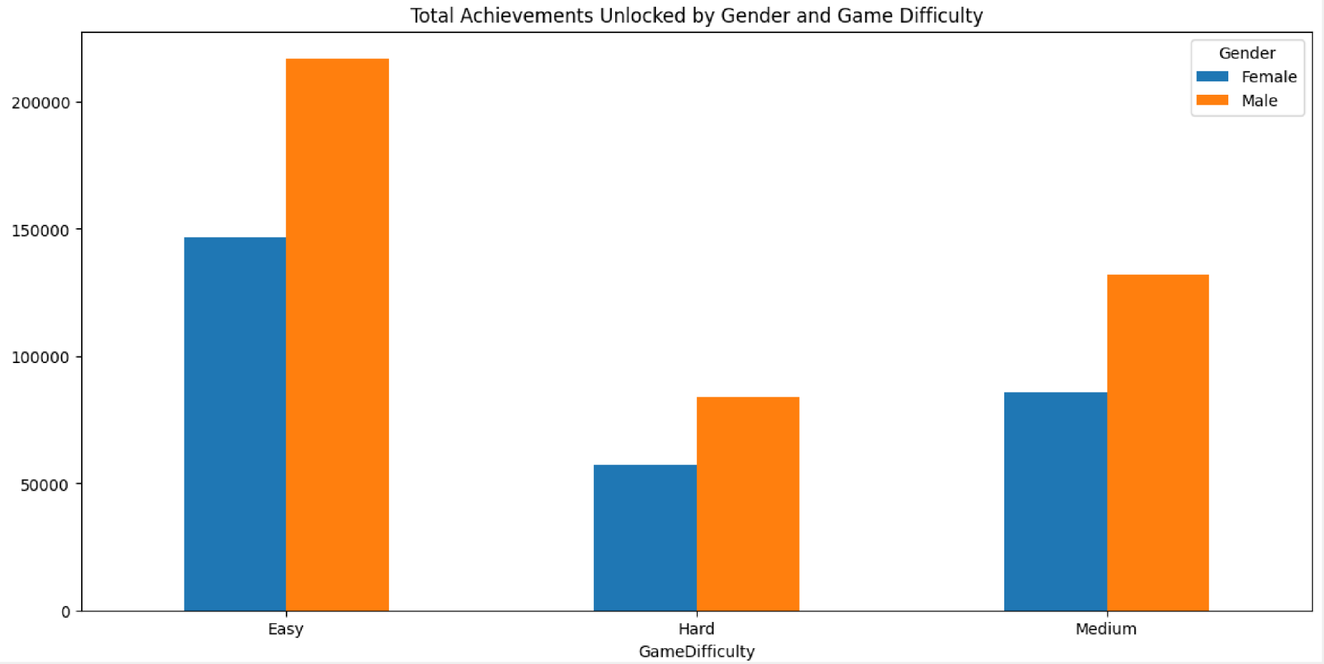
Dataset
Google Cloud Storage
testing-de
testing
Share
real.csv
Updated 2 days ago
Schema
Documentation
Lineage
Properties
Queries
Stats
Validation
Incidents
Search in schema...
Field
Description
Tags
Glossary Terms
PlayerID Number
Age Number
Gender String
Location String
GameGenre String
PlayTimeHours Number
InGamePurchases Number
GameDifficulty String
SessionsPerWeek Number
AvgSessionDurationMinutes Number
Last synchronized 6 minutes ago
About
No documentation yet. Share your knowledge by adding documentation and links to helpful resources.
Add Documentation
Add Link
Owners
No owners added yet. Adding owners helps you keep track of who is responsible for this data.
Add Owners
Tags
No tags added yet. Tag entities to help make them more discoverable and call out their most important attributes.
Add Tags
Glossary Terms
No terms added yet. Apply glossary terms to entities to classify their data.
Add Terms
Domain
No domain set. Group related entities based on your organizational structure using by adding them to a Domain.





Hasil viasualisasi

dari hasil gamabar disamping kita bisa melihat dimana waktu bermain laki laki di tigkat kesulitana manapun itu lebih lama yang mengakibatkan semakain berkembang dan terbiasa dia karena bermain dengan waktu yang lama.

dan ini juga yang mengakibatkan achivment yang didapat jelas lebih tingi laki laki karena dengan sering kita bermain maka kia akan sering terbiasa mengguanakan nya

Berdasarkan analisis, dapat disimpulkan bahwa pencapaian dalam game online tidak bergantung pada gender, melainkan pada waktu bermain yang diinvestasikan. Dengan kesempatan yang setara, pemain perempuan dapat mencapai hasil yang setara dengan pemain laki-laki.

Terima Kasih