PROJECT: ANALYZING UNICORN COMPANIES

Did you know that the average return from investing in stocks is **10% per year** (not accounting for inflation)? But who wants to be average?!

You have been asked to support an investment firm by analyzing trends in high-growth companies. They are interested in understanding which industries are producing the highest valuations and the rate at which new high-value companies are emerging. Providing them with this information gives them a competitive insight as to industry trends and how they should structure their portfolio looking forward.

You have been given access to their `unicorns` database, which contains the following tables:

dates

Column	Description
`company_id`	A unique ID for the company.
`date_joined`	The date that the company became a unicorn.
`year_founded`	The year that the company was founded.

funding

Column	Description
`company_id`	A unique ID for the company.
`valuation`	Company value in US dollars.
`funding`	The amount of funding raised in US dollars.
`select_investors`	A list of key investors in the company.

industries

Column	Description
`company_id`	A unique ID for the company.
`industry`	The industry that the company operates in.

companies

Column	Description
`company_id`	A unique ID for the company.
`company`	The name of the company.

Column	Description
city	The city where the company is headquartered.
country	The country where the company is headquartered.
continent	The continent where the company is headquartered.

Projects Data DataFrame as df

```
WITH top_industries AS
(
    SELECT i.industry,
        COUNT(i.*)
    FROM industries AS i
    INNER JOIN dates AS d
    USING(company_id)
    WHERE EXTRACT(year FROM d.date_joined) in ('2019', '2020', '2021')
    GROUP BY industry
    ORDER BY count DESC
    LIMIT 3
),

yearly_rankings AS
(
    SELECT COUNT(i.*) AS num_unicorns,
        i.industry,
        EXTRACT(year FROM d.date_joined) AS year,
        AVG(f.valuation) AS average_valuation
    FROM industries AS i
    INNER JOIN dates AS d
    USING(company_id)
    INNER JOIN funding AS f
    USING(company_id)
    GROUP BY industry, year
)

SELECT industry,
    year,
    num_unicorns,
    ROUND(AVG(average_valuation / 1000000000), 2) AS average_valuation_billions
FROM yearly_rankings
WHERE year in ('2019', '2020', '2021')
    AND industry in (SELECT industry
                     FROM top_industries)
GROUP BY industry, num_unicorns, year
ORDER BY year DESC, num_unicorns DESC
```

	industry	year	num…	average_valuation_billions
0	Fintech	2021	138	
1	Internet software & services	2021	119	
2	E-commerce & direct-to-consumer	2021	47	
3	Internet software & services	2020	20	
4	E-commerce & direct-to-consumer	2020	16	
5	Fintech	2020	15	
6	Fintech	2019	20	
7	Internet software & services	2019	13	
8	E-commerce & direct-to-consumer	2019	12	

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