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

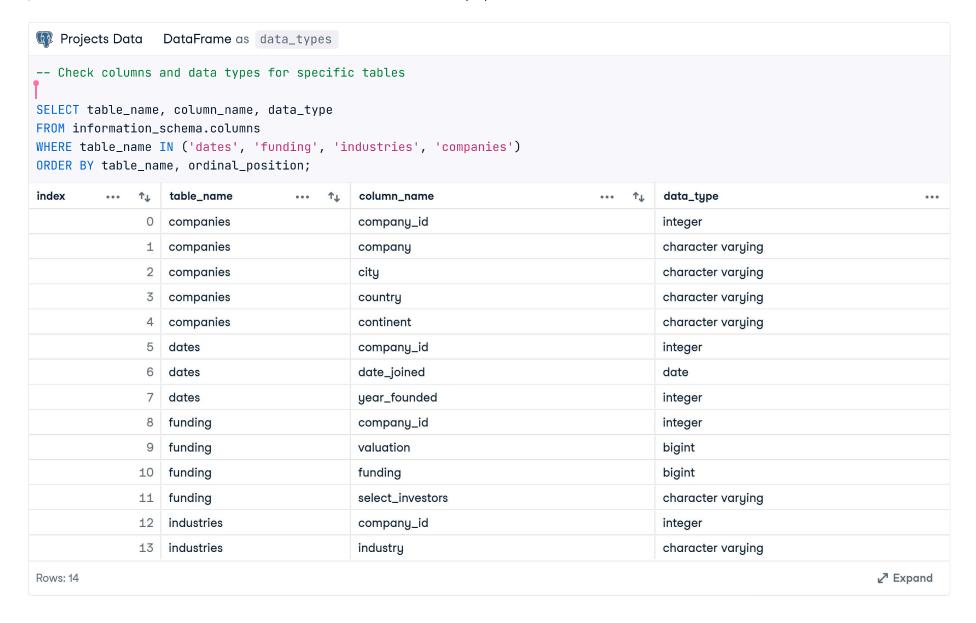
Column	Description	
company_id	A unique ID for the company.	
valuation	Company value in US dollars.	
funding	The amount of funding raised in US dollars.	
select_investors	A list of key investors in the company.	

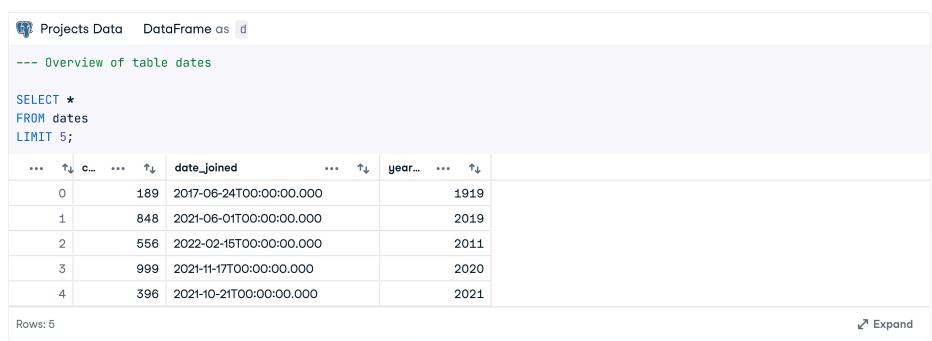
industries

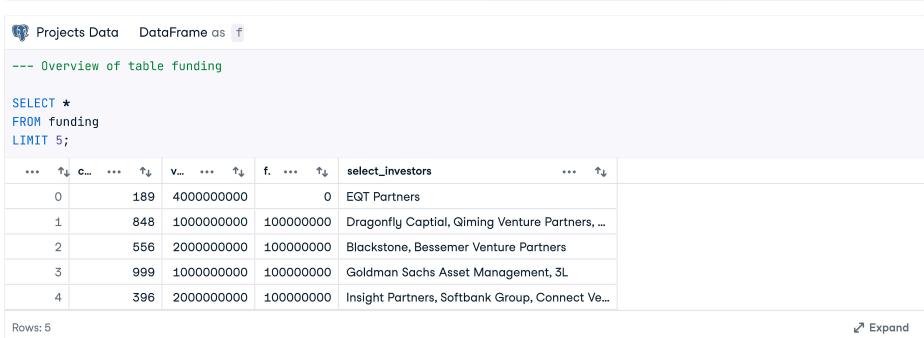
Column	Description	
company_id	A unique ID for the company.	
industry	The industry that the company operates in.	

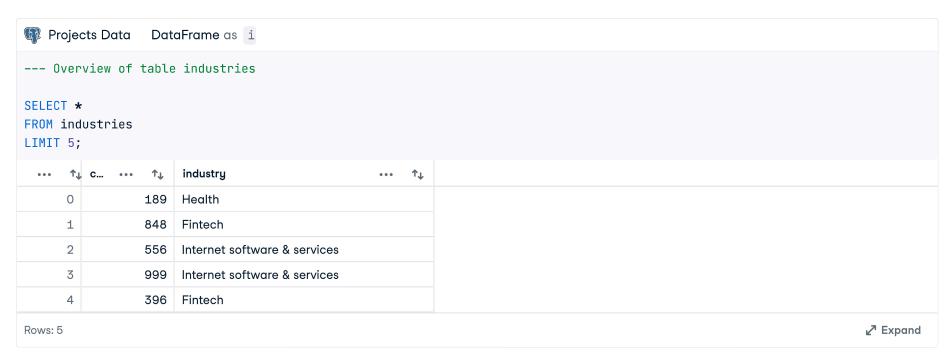
companies

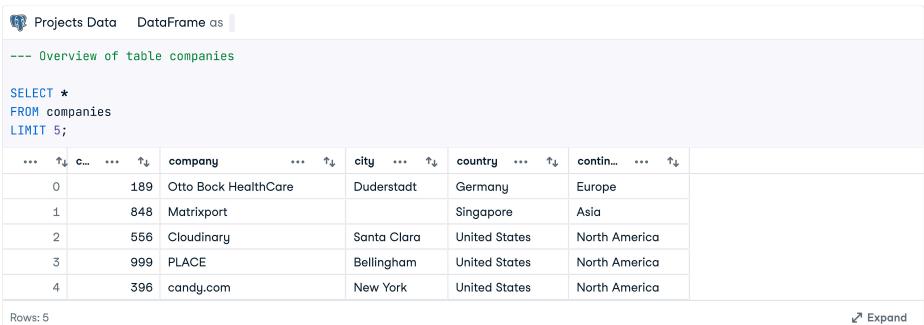
Column	Description		
company_id	A unique ID for the company.		
company	The name of the company.		
city	The city where the company is headquartered.		
country	The country where the company is headquartered.		
continent	The continent where the company is headquartered.		









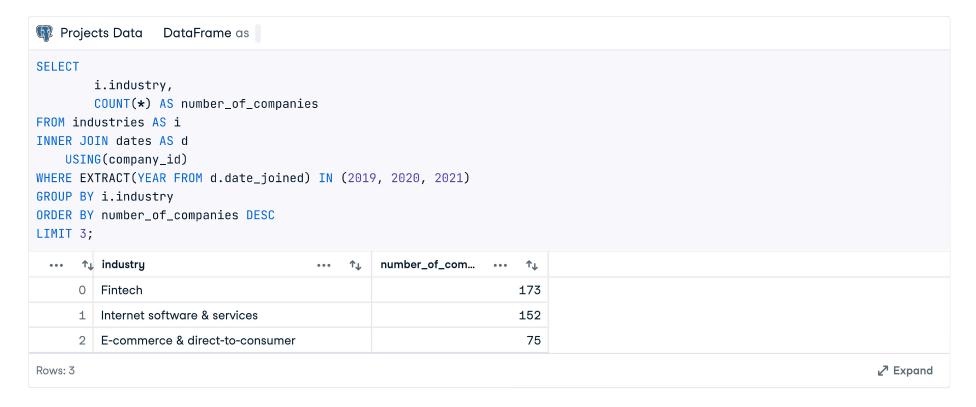


The output

Your query should return a table in the following format:

industry	year	num_unicorns	average_valuation_billions
industry1	2021		
industry2	2020		
industry3	2019		
industry1	2021		
industry2	2020		
industry3	2019		
industry1	2021		
industry2	2020		
industry3	2019		

Where industry1, industry2, and industry3 are the three top-performing industries.



```
Projects Data
                  DataFrame as
SELECT
         i.industry,
         EXTRACT(YEAR FROM d.date_joined) AS year,
         COUNT(i.company_id) AS num_unicorns,
         ROUND(AVG(f.valuation), 2) AS avg_valuation
FROM industries AS i
INNER JOIN dates AS d
    USING(company_id)
INNER JOIN funding AS f
    USING(company_id)
WHERE EXTRACT(YEAR FROM d.date_joined) IN (2019, 2020, 2021)
GROUP BY i.industry, year
ORDER BY year ASC
                                                 \uparrow_{\downarrow}
       ↑ industry
                                                             ↑↓ num...
                                                                             \uparrow_{\downarrow}
                                                                                  avg_v... ••• ↑↓
          Artificial intelligence
                                                         2019
                                                                             14
                                                                                      4500000000
                                                         2019
                                                                              6
                                                                                    4166666666.67
          Auto & transportation
       2
          Consumer & retail
                                                         2019
                                                                              3
                                                                                    3666666666.67
       3
          Cybersecurity
                                                         2019
                                                                              4
                                                                                      2250000000
          Data management & analytics
                                                         2019
                                                                                     11500000000
                                                                              4
          E-commerce & direct-to-consumer
                                                         2019
                                                                             12
                                                                                    2583333333.33
       5
       6
          Edtech
                                                         2019
                                                                              1
                                                                                      1000000000
       7
          Fintech
                                                         2019
                                                                             20
                                                                                      6800000000
       8
          Health
                                                         2019
                                                                              3
                                                                                    3333333333.33
          Internet software & services
                                                         2019
                                                                             13
                                                                                    4230769230.77
          Mobile & telecommunications
                                                         2019
     10
                                                                              4
                                                                                      2000000000
                                                         2019
                                                                              9
                                                                                    288888888.89
     11
          Other
          Supply chain, logistics, & delivery
                                                         2019
                                                                              8
     12
                                                                                      300000000
     13
          Travel
                                                         2019
                                                                              3
                                                                                      4000000000
                                                         2020
                                                                              3
     14
          Artificial intelligence
                                                                                      4000000000
                                                         2020
                                                                              5
     15
          Auto & transportation
                                                                                      300000000
```

Rows: 43

```
Projects Data
                 DataFrame as
--- CTE1 top_performing_industries
WITH top_performing_industries AS
(
    SELECT
        i.industry,
        COUNT(*) AS number_of_companies
    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 i.industry
    ORDER BY number_of_companies DESC
    LIMIT 3
),
--- CTE2 top_valuation
top_valuation AS
    SELECT
        i.industry,
        EXTRACT(YEAR FROM d.date_joined) AS year,
        COUNT(i.company_id) AS num_unicorns,
        ROUND(AVG(f.valuation), 2) AS avg_valuation
    FROM industries AS i
    INNER JOIN dates AS d
        USING(company_id)
    INNER JOIN funding AS f
        USING(company_id)
    WHERE EXTRACT(YEAR FROM d.date_joined) IN (2019, 2020, 2021)
    GROUP BY i.industry, year
    ORDER BY year ASC
)
```

```
--- Final Query
SELECT
    industry,
    year,
    num_unicorns,
    ROUND(AVG(avg_valuation) / 1000000000, 2) AS average_valuation_billions
FROM top_valuation AS tv
INNER JOIN top_performing_industries AS tpi
    USING(industry)
WHERE year IN (2019, 2020, 2021)
  AND industry IN (SELECT industry FROM top_performing_industries)
GROUP BY industry, year, num_unicorns
OPDED BY year DESC num uniconne DESC+
                                                                          \uparrow_{\downarrow}
                                                                                average_valuation_billions
      ↑ industry
                                               Τ↑
                                                       ••• ↑』 num... •••
                                                                                                            •••
                                                                                                                 \uparrow
        Fintech
                                                        2021
                                                                           138
                                                                                                                2.75
         Internet software & services
                                                        2021
                                                                           119
                                                                                                                2.15
                                                                            47
      2
          E-commerce & direct-to-consumer
                                                        2021
                                                                                                                2.47
      3
         Internet software & services
                                                        2020
                                                                            20
                                                                                                               4.35
         E-commerce & direct-to-consumer
                                                        2020
                                                                            16
                                                                                                                   4
      5
         Fintech
                                                        2020
                                                                            15
                                                                                                                4.33
      6
          Fintech
                                                        2019
                                                                            20
                                                                                                                 6.8
      7 Internet software & services
                                                        2019
                                                                            13
                                                                                                                4.23
          E-commerce & direct-to-consumer
                                                        2019
                                                                            12
                                                                                                                2.58
Rows: 9
                                                                                                                                  Expand
```