 **LiveLab** | Unicorn Companies

**INTRODUCTION:** 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 maximizing returns on their investments. Providing them with this information gives them a competitive insight as to industry trends and how they should structure their portfolio looking forward.

**HOW IT WORKS:** Follow the prompts in the questions below to investigate your data. Post your answers in the provided boxes: the **yellow boxes** for the queries you write and **blue boxes** for text-based answers. No need to submit this document to your Global Tech Team – it’s just for you!

SQL App: [**Here’s that link**](https://sql.hq.globaltech.org/queries/new) to our specialized SQL app, where you’ll write your SQL queries and interact with the data.

**—** Data Set **Description**

**company** - Company name

**valuation** - Company valuation in billions (B) of dollars

**date\_joined** - The date in which the company reached $1 billion in valuation

**industry** - Company industry

**city** - City the company was founded in

**country** - Country the company was founded in

**continent** - Continent the company was founded in

**year\_founded** - Year the company was founded

**funding** - Total amount raised across all funding rounds in US dollars

**select\_investors** - Top 4 investing firms or individual investors (some have less than 4)

**— Task 1:** Strategic Partnership

Collaboration with investors who have successfully funded multiple unicorn companies can provide valuable insights and co-investment opportunities. Exploring partnerships with these investors could enhance the firm’s ability to identify promising ventures.

1. To warm up, write a query that returns the company, funding, valuation, and select\_investors columns in the dataset (crunchbase.unicorns). Copy and paste your query into the box below.

| (write your query here) |
| --- |

1. The world's top five unicorn investors are:

* Accel
* Tiger Global Management
* Andreessen Horowitz
* Sequoia Capital
* Insight Partners

Modify your query to return all columns from crunchbase.unicorns and a new column called top\_five. WHEN select\_investors includes at least one of the world’s top five unicorn investors, top\_five should be equal to 1; otherwise, it should be equal to 0.

| (write your query here) |
| --- |

1. WITH your query from Part **B.**, write a *new* query that returns the proportion of unicorn companies in the dataset whose funding comes from a top five unicorn investment group. What is the proportion?

| (write your query here) |
| --- |

| (write your answer here) |
| --- |

1. Modify your query from Part **C.** to now return the total amount of funding raised and the total valuation of all unicorn companies in the dataset, grouped by whether or not an investment partner is in the top five unicorn investment groups.

| WITH top\_five\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors LIKE '%Accel%'  OR select\_investors LIKE '%Tiger Global Management%'  OR select\_investors LIKE '%Andreessen Horowitz%'  OR select\_investors LIKE '%Sequoia Capital%'  OR select\_investors LIKE '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  top\_five,  SUM(funding) AS total\_funding,  SUM(valuation) AS total\_valuation  FROM  top\_five\_unicorns  GROUP BY  top\_five |
| --- |

The **WITH** Keyword:

The WITH keyword can be used to query data tables with columns you created. For the rest of the tasks, you’ll just add to this query, selecting and aggregating columns of new\_unicorns.

| WITH new\_unicorns AS (SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%'  THEN 1  ELSE 0  END AS top\_five  FROM crunchbase.unicorns |
| --- |

**— Task 2:** Returns on Investment

Knowing which unicorn companies have had the biggest return on investment (ROI) helps the investment firm understand the types of businesses and industries that have the potential to generate substantial profits.

We’ll use the percent growth as a proxy for the ROI. Percent growth can be calculated as the (Gain - Cost) / Cost \* 100. In our case, the "Gain" would be the valuation of the company, and the "Cost" would be the amount of funding raised.

1. Modify the query in the purple box above (or your query from Task 1, Part **C.**) to that creates one more column: the pct\_growth.

Select all columns from the new\_unicorns table.

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  \*,  ((valuation - funding) / funding) \* 100 AS pct\_growth  FROM  new\_unicorns |
| --- |

1. Write a query that identifies which unicorn companies have had the biggest percent growth. What three companies had the highest returns?

**HINT:** You’ll need to SELECT all companies and ORDER BY the largest percent growth.

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  \*,  ((valuation - funding) / funding) \* 100 AS pct\_growth  FROM  new\_unicorns  ORDER BY  pct\_growth DESC  LIMIT  3 |
| --- |

| SSENSE, Otto Bock HealthCare, Uplight |
| --- |

1. Modify your query in Part B. to include companies funded by at least one of the world’s top five unicorn investors. Is the list the same?

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  \*,  ((valuation - funding) / funding) \* 100 AS pct\_growth  FROM  new\_unicorns  WHERE  top\_five = 1  ORDER BY  pct\_growth DESC  LIMIT  3 |
| --- |

| No the list is a bit different, with only SSENSE still being present. This time it’s DistroKid, SSENSE, and Poizon. |
| --- |

**— Task 3:** Industry Opportunities

Identifying industries with a high concentration of unicorns provides insight into where potential investment opportunities lie. By focusing on industries with a large number of unicorns, an investment firm might be able to target sectors that are likely to yield attractive returns on investment.

1. Write a query that identifies which industries have had the most unicorns. **Note:** Keep using the new\_unicorns table!!

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  industry,  COUNT(\*) AS num\_unicorns  FROM  new\_unicorns  GROUP BY  industry  ORDER BY  num\_unicorns DESC |
| --- |

| Fintech = 224 |
| --- |

1. Modify your query to include the average percent growth seen by industry.

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  industry,  COUNT(\*) AS num\_unicorns,  AVG(((valuation - funding) / funding) \* 100) AS avg\_pct\_growth  FROM  new\_unicorns  GROUP BY  industry  ORDER BY  num\_unicorns DESC,  avg\_pct\_growth DESC |
| --- |

1. Modify your query one last time to include the proportion of unicorn companies in the **Fintech**, **Internet software & services**, and **E-commerce & direct-to-consumer** industries whose funding comes from a top five unicorn investment group. What proportion of unicorns in the Fintech industry saw funding from a top five investment group?

| WITH new\_unicorns AS (  SELECT  \*,  CASE  WHEN select\_investors ilike '%Accel%'  OR select\_investors ilike '%Tiger Global%'  OR select\_investors ilike '%Andreessen Horowitz%'  OR select\_investors ilike '%Sequoia Capital%'  OR select\_investors ilike '%Insight Partners%' THEN 1  ELSE 0  END AS top\_five  FROM  crunchbase.unicorns  )  SELECT  industry,  COUNT(\*) AS num\_unicorns,  AVG(((valuation - funding) / funding) \* 100) AS avg\_pct\_growth,  SUM(  CASE  WHEN top\_five = 1 THEN 1  ELSE 0  END  ) AS num\_top\_five,  SUM(  CASE  WHEN top\_five = 1 THEN 1  ELSE 0  END  ) / COUNT(\*) :: float AS prop\_top\_five  FROM  new\_unicorns  WHERE  industry IN (  'Fintech',  'Internet software & services',  'E-commerce & direct-to-consumer'  )  GROUP BY  industry  ORDER BY  num\_unicorns DESC,  avg\_pct\_growth DESC |
| --- |

| 26% of Fintech companies. |
| --- |

**— Task 4:** Recommendation

Based on the results of your SQL queries and comprehensive analysis, provide a data-driven recommendation to the investment firm on how they might structure their portfolio looking forward.

| * Focus on High Growth Industries: Industries like Fintech, Internet software & services, and E-commerce & direct-to-consumer have shown a high concentration of unicorn companies. * Target Companies with High Growth Potential: Identify companies with high percent growth (ROI) as they indicate potential for substantial profits. Companies like SSENSE, Otto Bock HealthCare, and Uplight have demonstrated significant growth and could be considered for investment. * Consider Top Unicorn Investors: Companies funded by top unicorn investment groups such as Accel, Tiger Global Management, Andreessen Horowitz, Sequoia Capital, and Insight Partners have shown promising growth. * Diversify the Portfolio: While focusing on high-growth industries and companies, it's also important to diversify the portfolio to mitigate risk. Consider investing in companies across different industries to spread the risk and maximize returns. * Monitor Industry Trends: Stay updated with the latest trends and developments in the targeted industries to identify new investment opportunities. |
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**— LevelUp:** Industry Hubs

Cities known as industry hubs, like Silicon Valley, Beijing, and London, foster collaborative environments, specialized talent pools, and regulatory support. Investing in companies headquartered in these hubs might provide access to cutting-edge innovation and established ecosystems.

1. Write a query that identifies which countries have the most unicorns.

| (write your query here) |
| --- |

| (write your answer here) |
| --- |

1. Modify your query. Are there any U.S. cities that appear to be industry hubs?

| (write your query here) |
| --- |

| (write your answer here) |
| --- |

1. Write a query that returns the proportion of unicorn companies in **San Francisco** and **New York** whose funding comes from a top five unicorn investment group.

| (write your query here) |
| --- |

1. Does this new insight alter your recommendation to the investment firm? Why or why not?

| (Write your answer here) |
| --- |