Milestone 2 | Analyzing Startup Investments

INTRODUCTION: Crunchbase is a platform that provides information and news on companies and investors, primarily in the startup and technology space. Over the past decade, it has become a popular business tool and a vital resource for entrepreneurs and those trying to assess startup companies.

Startups hardly ever go it alone. They need investors to give them money in order to develop their products, expand, and build enough momentum to be successful. For this Milestone, you'll take on the role of a strategic advisor to a global venture capital firm, using data analysis to evaluate and advise on high-potential startups for investment.

HOW IT WORKS: Follow the prompts in the tasks 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. When you're done, export your document as a pdf file and upload it to HQ for feedback from The Accelerator Team. Please don't *ever* remove (paste your query below 👇) or (write your **answer** below 👇). These help your Evaluator!

RESOURCES: If you need hints on the Milestone or are feeling stuck, there are multiple ways of getting help. Attend Drop-In Hours to work on these problems with your peers, or reach out to the HelpHub if you have questions. Good luck!

— Data Set **Description**

Your first step in any data project is to understand the data at your disposal. The Crunchbase "company investments" data set (`crunchbase.companies`) is a single table with 20 columns and over 27 000 rows.

Here are columns that you'll be using in this Milestone:

- **`name`** - Company's name.

- **`category_code`** - The company's main industry, market, or business area.
- **`status`** - The company's status. Can be "operating", "ipo", "acquired", or "closed".
- **`funding_total_usd`** - Total funding received by the company over their entire existence. Many of the later numeric columns in the dataset break down this total into component sources.

— **Task 1:** Top Funded Companies

A. Write a query that returns the **`name`**, **`category_code`**, **`status`**, and **`funding_total_usd`** for the twelve companies with the highest amount of funding.

HINT: You might need to include something to handle `NULL` in the funding column!

Try this prompt: I'm trying to rank startups by funding_total_usd, but some results have NULL values that are messing up my list. How would I filter out rows with NULL values in my SQL query so only companies with actual funding amounts appear in my results?

(paste your query below 👇)

```
SELECT
  name,
  category_code,
  status,
  funding_total_usd
FROM crunchbase.companies
WHERE funding_total_usd IS NOT NULL
ORDER BY funding_total_usd DESC
LIMIT 12
```

B. Check the data returned from your query. What is the name of the company with the highest funding?

(write your **answer** below 👇)

> Clearwire (with 5,700,000,000 USD)

C. Compare the funding received by the top-funded company and the twelfth-most-funded company (at the end of the output). How much more did the number 1 company receive?

HINT: Calculate your answer in terms of the ratio, by dividing the larger amount by the smaller amount; you don't need to do that calculation with a query.

(write your **answer** below 👇)

> 12th most-funded company: Blackberry (1,000,000,000 USD)
> Ratio= 1st/12th = 5.7
> So, Clearwise receives 5.7 times more funding than Blackberry.

D. How many companies in the top twelve have a listed status of 'acquired' rather than 'operating' or 'ipo'? NOTE: you do not need to write a SQL query to answer this question!

(write your **answer** below 👇)

> Clearwire is the ONLY ONE that has the 'acquired' status.

— **Task 2:** Top Closed Companies

Among the top twelve companies, none were listed as 'closed', meaning the company has stopped operating. Let's focus on companies with that status next.

A. Modify your query from Task 1A to view only companies with a 'closed' status . In other words, retrieve the twelve companies that received the most funding but whose status is closed.

(paste your query below 👇)

```
SELECT
  name,
  category_code,
  status,
  funding_total_usd
FROM crunchbase.companies
WHERE funding_total_usd IS NOT NULL
  AND status = 'closed'
ORDER BY funding_total_usd DESC
LIMIT 12
```

B. What is the name of the company with the highest funding that closed down?

(write your **answer** below 👇)

Abound Solar

C. How much funding did they receive?

(write your **answer** below 👇)

$510,000,000

D. The 'cleantech' category shows up multiple times in the top twelve. How many of the closed companies in the top twelve come from this category?

NOTE: you do not need to write a SQL query to answer this question!

(write your **answer** below 👇)

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E. Many cleantech startups attract significant funding but struggle to succeed. This raises important questions about the challenges within the industry.

Try this prompt: The cleantech category shows up frequently among the most-funded startups that later failed. Why might this be the case? Is cleantech inherently risky, or are there external factors that make success harder in this space?

Based on ChatGPT's response, do you think cleantech is a bad investment, or just a high-risk, high-reward industry?

(write your **answer** below 👇)

Based on ChatGPT's response, I think cleantech is a high-risk, high-reward industry rather than an automatically bad investment to consider. Since the success of cleanup requires large upfront capital, it is hard to either break entry or sustain in the long-term if the generated revenue does not satisfy. These challenges don't necessarily mean a definite NO to investment, but requires strategic planning and effort for sustainability.

Moreover, cleanup success is also sensitive to policy support and market competitiveness. Although these variants are external factors and thus more difficult to control/predict, they are not inherently equal to failure. If the companies are able to overcome them, the investment can be significantly worthy.

— **Task 3:** Deeper into Clean Technology

The fact that a lot of highly-funded companies that have a status of 'closed' came from cleantech seems like an interesting thread to pull at, so let's look at them a bit more.

A. Let's take a step back first. Write a query that returns the **`name`**, **`category_code`**, and **`status`** of companies with the 'cleantech' category code.

(paste your **query** below 👇)

```
SELECT
  name,
  category_code,
  status
FROM crunchbase.companies
WHERE category_code = 'cleantech'
```

How many companies have 'cleantech' as the main market category? Use the information bar above the output to see the number of rows in the output.

(write your **answer** below 👇)

898 companies

B. About 7.9% of all companies in the full data table are listed with a 'closed' status. Add an additional condition to your query to only look at closed, 'cleantech' companies.

(paste your query below 👇)

```
SELECT
  name,
  category_code,
  status
FROM crunchbase.companies
WHERE
  category_code = 'cleantech'
  AND status = 'closed'
```

What percentage of ‘cleantech’ companies have a closed status, and how does this compare to the data as a whole? HINT: You’ll need to use your answer from 3A.

(write your **answer** below 👇)

63 out of 898 cleantech companies have a closed status.
So, about 7.02% cleantech companies have a status of ‘closed’.

— LevelUp

A. To close things out, let’s be a little creative and look at company names just for fun. How many ‘cleantech’ category companies have ‘solar’, ‘power’, or ‘energy’ in their names?

HINT: Your filter conditions should use the `ILIKE` keyword and the wildcard character (%). Make sure to double check your use of parentheses to determine the order the `AND` and `OR` keywords are evaluated. If done correctly, your query will return 275 rows.

(paste your **query** below 👇)

```
SELECT
  name,
  category_code,
  status
FROM
  crunchbase.companies
WHERE
  category_code = 'cleantech'
  AND (
    name ILIKE '%solar%'
    OR name ILIKE '%power%'
    OR name ILIKE '%energy%'
  )
```

(write your **answer** below 👇)

275 companies.

— Submission

Great work completing this Milestone! To submit your completed Milestone, you will need to download / export this document as a PDF and then upload it to the Milestone submission page. You can find the option to download as a PDF from the File menu in the upper-left corner of the Google Doc interface.