Industry Trends in Unicorn Companies

Executive Summary

This project analyzes global unicorn startups—private companies valued at $1B or more—focusing on high-growth industries and valuation trends from 2019 to 2021. The objectives were to identify which sectors are producing the most unicorns and to quantify their average valuations, providing actionable insights for investors and business strategists.[1]

Project Objectives

- Identify the **top-performing industries** producing the most unicorns.
- Track **yearly trends** in unicorn emergence and industry growth since 2019.
- Calculate and compare **average unicorn valuations** (in billions USD) by industry and year.
- Build a report-ready SQL workflow that demonstrates advanced querying with real-world data.[1]

Technologies & Tools Used

- **SQL Database**: `unicorns` dataset (simulated business scenario)
- **SQL Capabilities Used**: CTEs, JOINs, aggregation, filtering, subqueries
- **Visualization**: Data presented in tabular format for clarity
- **Reporting Platform**: Jupyter Notebook for interactive analysis.[1]

Dataset Description

The project was based on four main tables:

- **dates**: Company ID, date joined as unicorn, founding year
- **funding**: Company ID, valuation, funding amount, investor list
- **industries**: Company ID, industry sector
- **companies**: Company ID, company name, location (city, country, continent)

Key metrics calculated: yearly counts and average valuations of unicorns by industry.[1]

Approach & Methodology

- Joined multiple tables using `company_id` to associate industries, valuation, and founding/entry year.
- Filtered for unicorns that joined between 2019–2021.
- Used SQL aggregations (`COUNT`, `AVG`) and ranking to select the **top three industries** with the highest unicorn counts.
- Calculated average unicorn valuation (in billions) per industry-year.
- Output structured for reporting: clear, recruiter-friendly table with all key metrics.[1]

SQL Query Example

```
WITH unicorns_with_year AS (
  SELECT
    d.company_id,
    i.industry,
    EXTRACT(YEAR FROM d.date_joined) AS year,
    f.valuation
  FROM dates d
  JOIN industries i ON d.company_id = i.company_id
  JOIN funding f ON d.company_id = f.company_id
  WHERE EXTRACT(YEAR FROM d.date_joined) BETWEEN 2019 AND 2021
),
top_industries AS (
  SELECT
    industry,
    COUNT(*) AS total_unicorns
  FROM unicorns_with_year
  GROUP BY industry
  ORDER BY total_unicorns DESC
  LIMIT 3
)
SELECT
  u.industry,
  u.year,
  COUNT(*) AS num_unicorns,
  ROUND(AVG(u.valuation) / 1000000000, 2) AS average_valuation_billions
FROM unicorns_with_year u
JOIN top_industries t ON u.industry = t.industry
GROUP BY u.industry, u.year
```

```
ORDER BY u.year DESC, num_unicorns DESC;
```

Results & Impact

Industry	Year	Number of Unicorns	Avg. Valuation ($B)
Fintech	2021	138	2.75
Internet software & services	2021	119	2.15
E-commerce & direct-to-consumer	2021	47	2.47
Internet software & services	2020	20	4.35
E-commerce & direct-to-consumer	2020	16	4.00
Fintech	2020	15	4.33
Fintech	2019	20	6.80
Internet software & services	2019	13	4.23
E-commerce & direct-to-consumer	2019	12	2.58

- **Fintech**, **Internet software & services**, and **E-commerce & DTC** are the most active sectors.
- Fintech saw the highest number of new unicorns in 2021 (138), but 2019's cohort had the highest average valuation ($6.8B).
- Internet software has consistently high valuations and strong year-over-year growth.[1]

Challenges & Solutions

- **Data Joins**: Ensured no loss of records when merging multiple tables.
- **Industry Ranking**: Built rank-filtering logic to dynamically select top sectors rather than hardcoding names.
- **Valuation Normalization**: Converted all valuations to billions for easier comparison and visualization.[1]

Conclusion

This SQL-based analysis gives investors and recruiters a clear, data-backed overview of where unicorns are concentrated by industry, how the landscape is evolving, and where the highest valuations are found.

The project demonstrates advanced SQL reporting skills and the ability to answer complex business questions with data-driven evidence.[1]

Next Steps & Future Enhancements

- Expand time window for emerging industry trends.
- Integrate location and investor data for deeper insights.
- Automate regular reporting and dashboard deployment.

This report can be further tailored with visuals, ER diagrams, or integrated with BI tools for an even more professional presentation.