Top 10 Github Languages

	name	language_count
1.	JavaScript	1,099,966
2.	CSS	807,826
3.	HTML	777,433
4.	Shell	640,886
5.	Python	550,905
6.	Ruby	374,276
7.	Java	369,673
8.	PHP	339,426
9.	C	293,231
10.	C++	277,871

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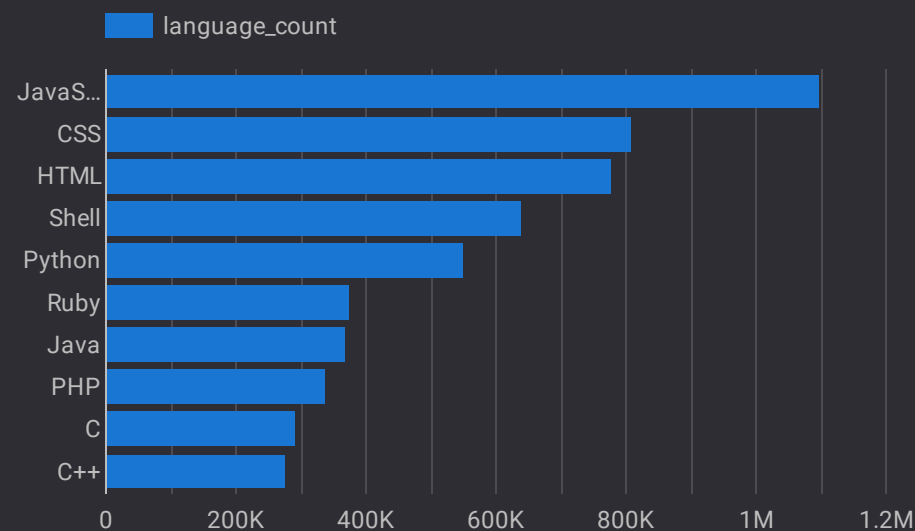
Timeframe: Data represents the top GitHub languages as of 2022.
Source: Data sourced from BigQuery Public Dataset `github_repos`.

Tools: BigQuery and Looker Studio
Created: 27/12/2024

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Github

Why This Data Matters

Guiding Developers and Aspiring Developers

- **Popular Languages:** Developers and students can focus on mastering languages with higher usage and demand, increasing their job prospects.

- **Trendy Tools:** Aspiring developers can identify frameworks and libraries to learn based on the languages most used in GitHub repositories.

Helping Businesses

- **Technology Adoption:** Companies can make informed decisions about widely adopted technologies for long-term sustainability and support.

- **Hiring Trends:** HR and recruitment teams can prioritize hiring developers skilled in the most popular languages, ensuring they meet industry needs.

Industry Skills

- **Web Technologies Focus:**

  Languages like **HTML, CSS, and JavaScript** dominate, indicating the increasing importance of frontend and web development skills in today's tech landscape.

Open-Source Contributions

- Developers skilled in these languages can contribute to **open-source projects**, strengthening their portfolios and gaining visibility in the tech community.

- Businesses can leverage these projects to **reduce development costs** and accelerate product development.

Summary

In short, this analysis highlights the languages driving modern software development. It guides learners and businesses in navigating technology adoption, hiring strategies, and contributions to open-source communities in a world of constant innovation.

Query Used

```
--This finds the top 1o github languages
SELECT
  language.name,
  COUNT(language.name) AS language_count
FROM
  `bigquery-public-data.github_repos.languages`,
  UNNEST(language) AS language
GROUP BY
  language.name
ORDER BY
  language_count DESC
LIMIT 10;
```

Key Learnings

- **Encountered Error:**

  I faced an **array struct error** while aggregating (COUNT(language.name)), as the language column was structured as an **array of structs**.

Solution:

Flattened the array using the `UNNEST()` function:

UNNEST(language) AS language

- This allowed me to **extract and analyze nested values**, enabling proper aggregation and sorting.

- **Insight Gained:**

- Learned how to handle **nested data structures** in SQL.

- Improved understanding of **array processing** in BigQuery, which is common in datasets involving hierarchical data.