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COMP1202 – The Debate

Java and the Pantheon of Programming Languages

Son Hoang
(adapted from Prof David Millard's slides)

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Part 1

Prologue

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What Other Programming Languages Do You Know

- Just for Laughs!: What (some) programming languages look like

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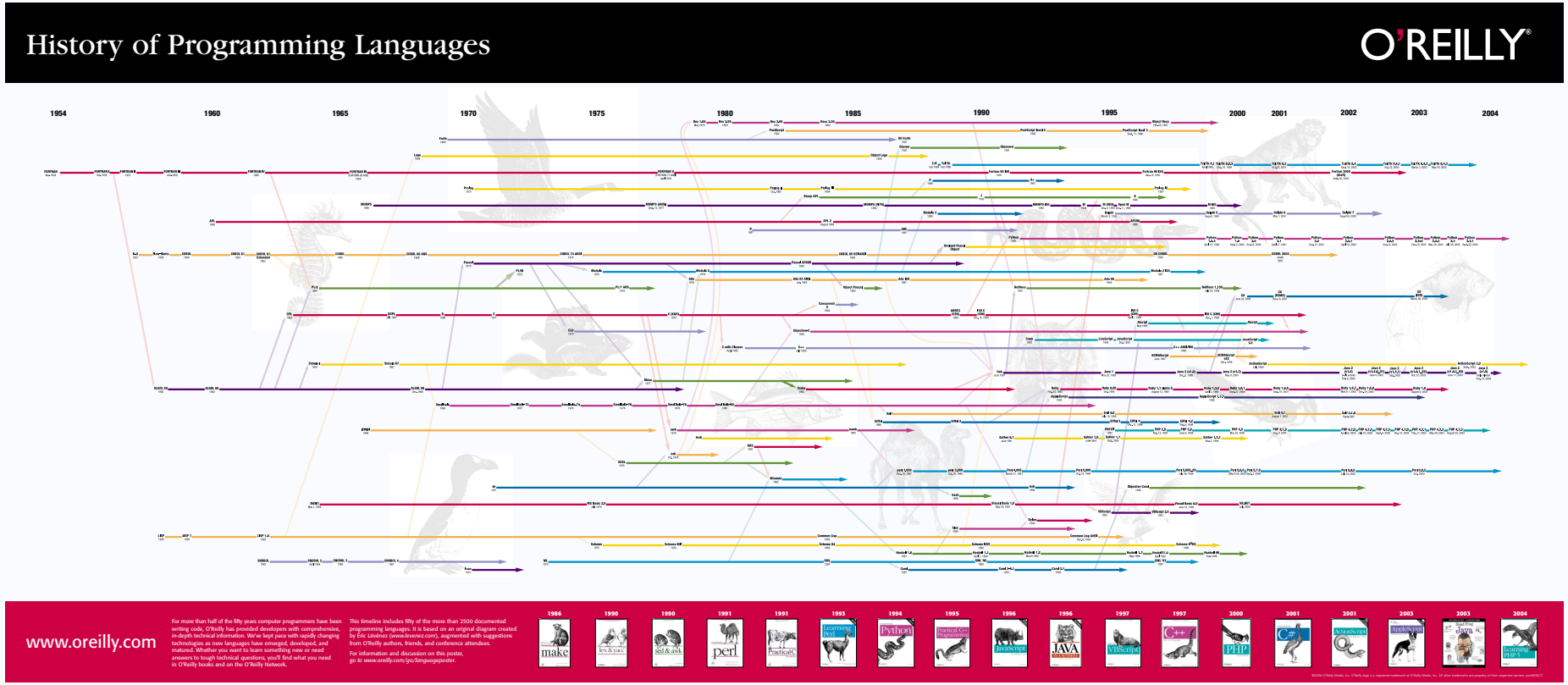
The Programming Language Family Tree

- https://cdn.oreillystatic.com/news/graphics/prog_lang_poster.pdf



- Another good source https://www.computerhistory.org/timeline/software-languages/

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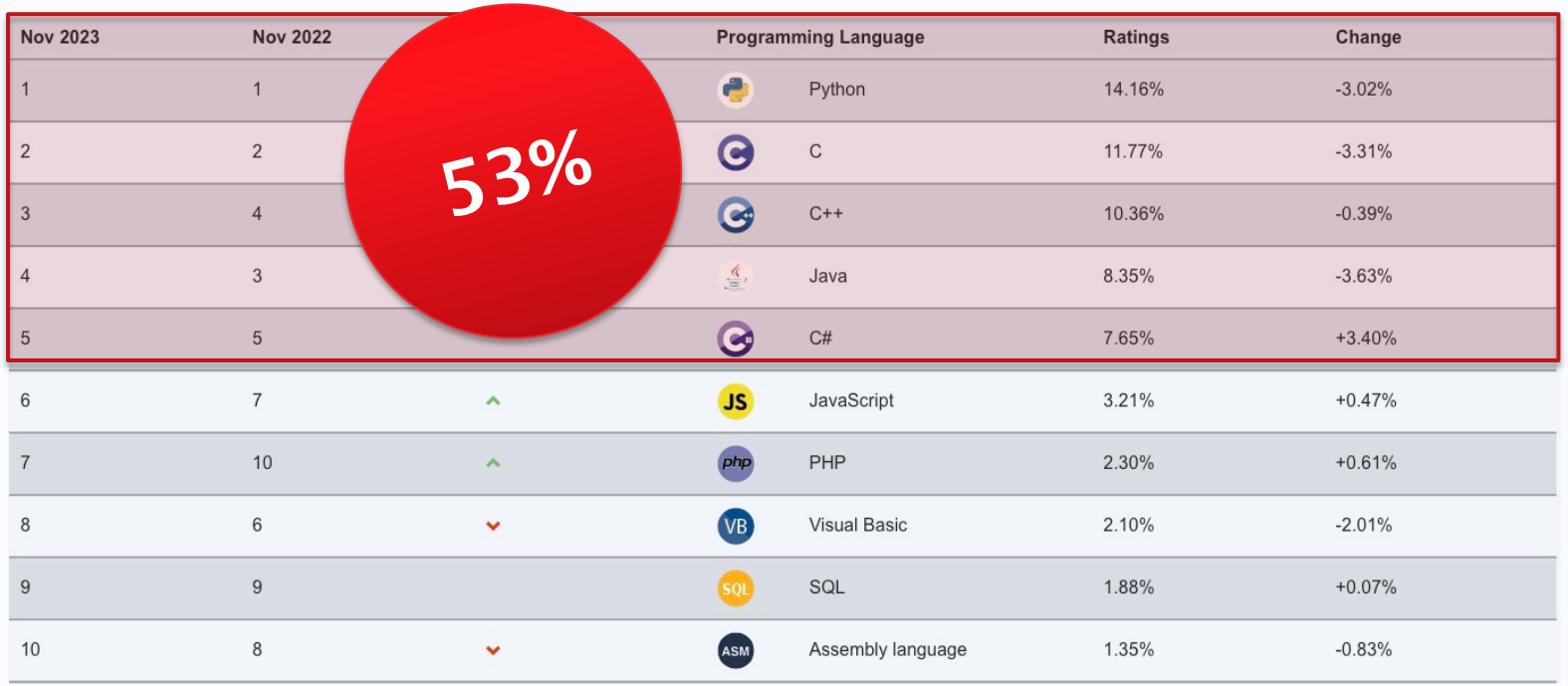
TIOBE Index

- Calculated monthly
- Based on web analysis
- Shows the zeitgeist



Nov 2023	Nov 2022		Programming Language	Ratings	Change
1	1		Python	14.16%	-3.02%
2	2		C	11.77%	-3.31%
3	4		C++	10.36%	-0.39%
4	3		Java	8.35%	-3.63%
5	5		C#	7.65%	+3.40%
6	7	▲	JavaScript	3.21%	+0.47%
7	10	▲	PHP	2.30%	+0.61%
8	6	▼	Visual Basic	2.10%	-2.01%
9	9		SQL	1.88%	+0.07%
10	8	▼	Assembly language	1.35%	-0.83%

https://www.tiobe.com/tiobe-index/

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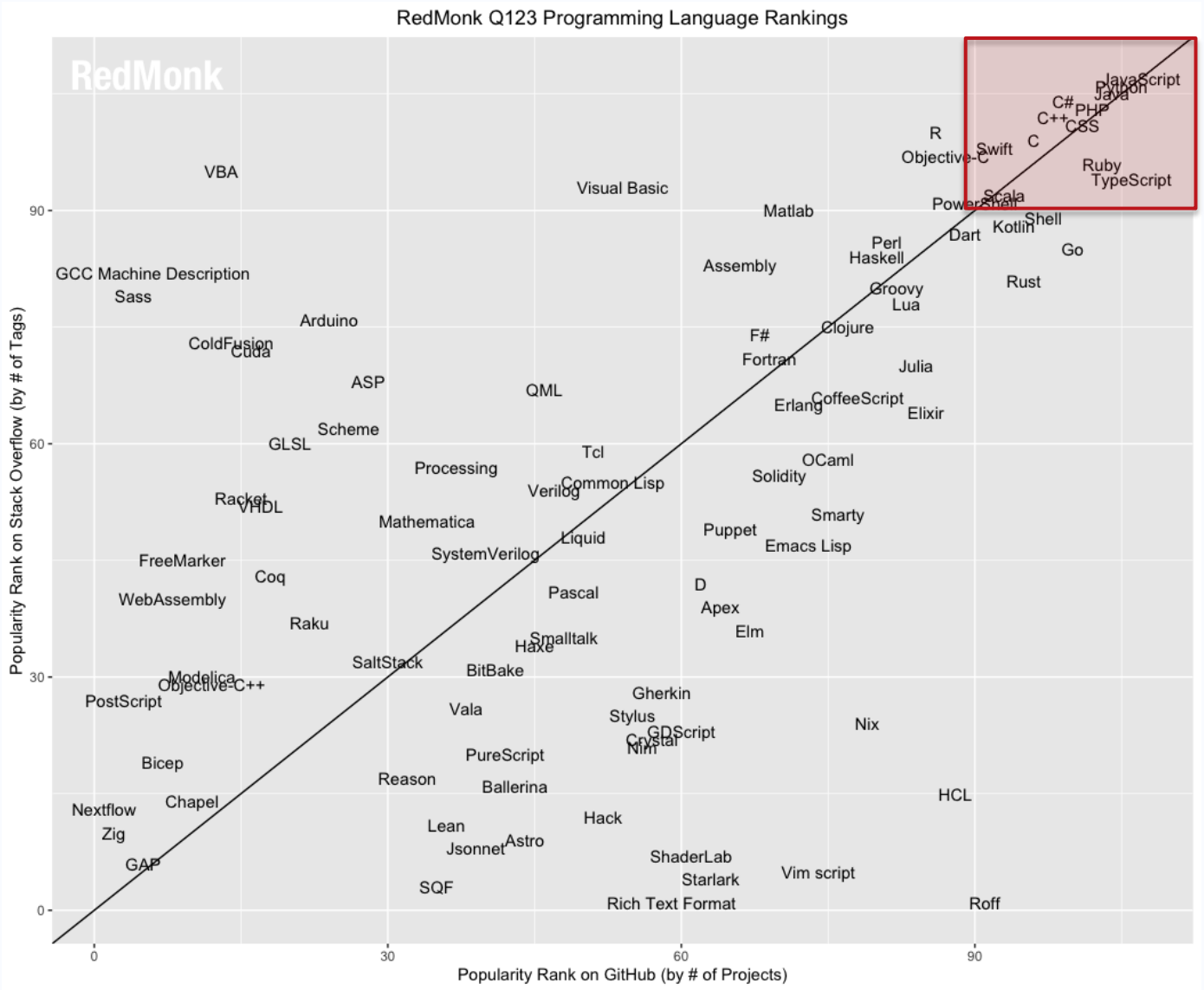
RedMonk

Based on presence in GitHub and StackOverflow



https://redmonk.com/sogrady/2023/05/16/language-rankings-1-23/

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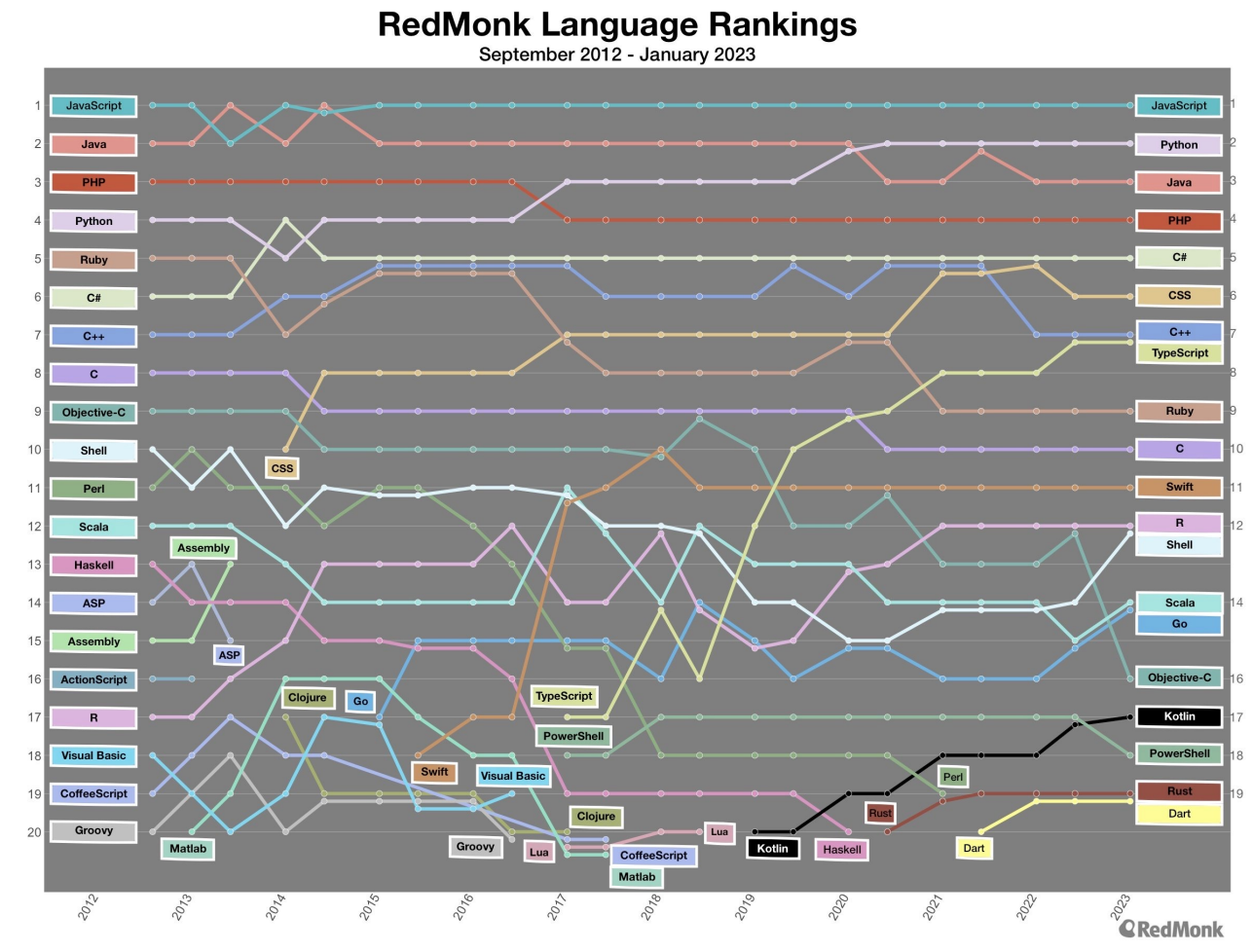
RedMonk Trend



https://redmonk.com/rstephens/2023/05/16/top20-jan2023/

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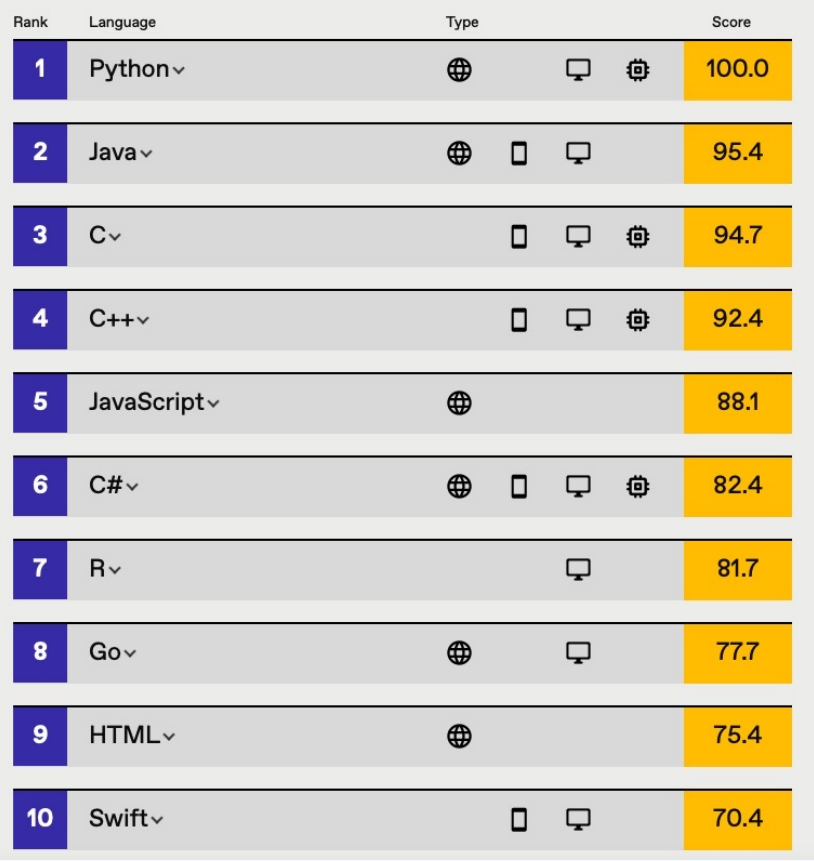
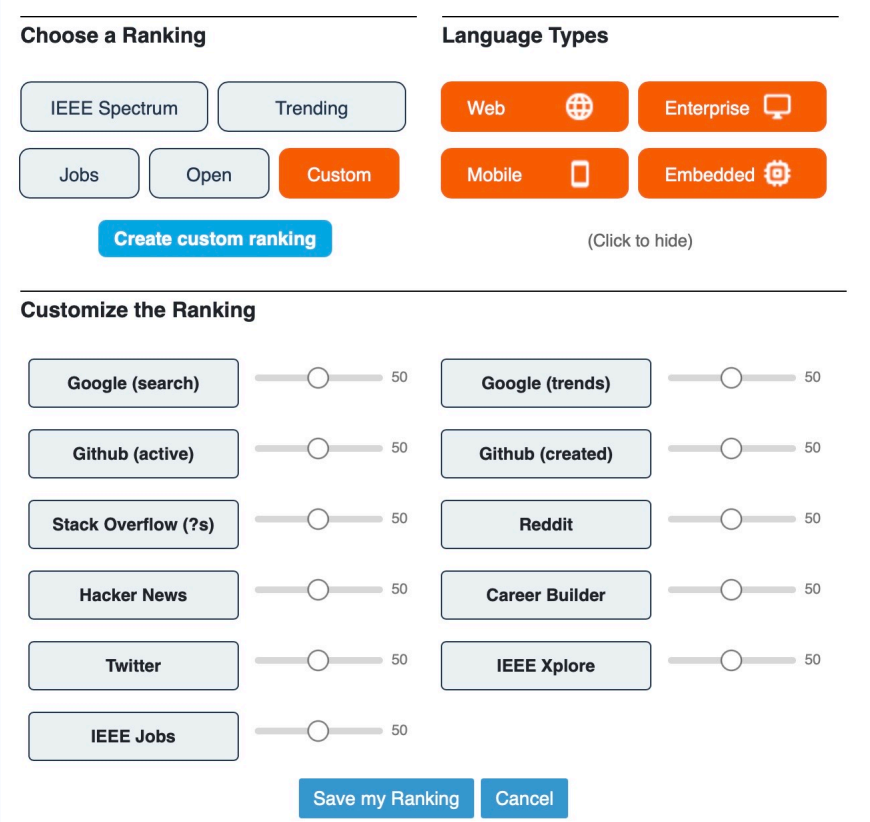
IEEE Spectrum 2021



Rank	Language	Type	Score
1	Python		100.0
2	Java		95.4
3	C		94.7
4	C++		92.4
5	JavaScript		88.1
6	C#		82.4
7	R		81.7
8	Go		77.7
9	HTML		75.4
10	Swift		70.4



- https://spectrum.ieee.org/top-programming-languages-2021

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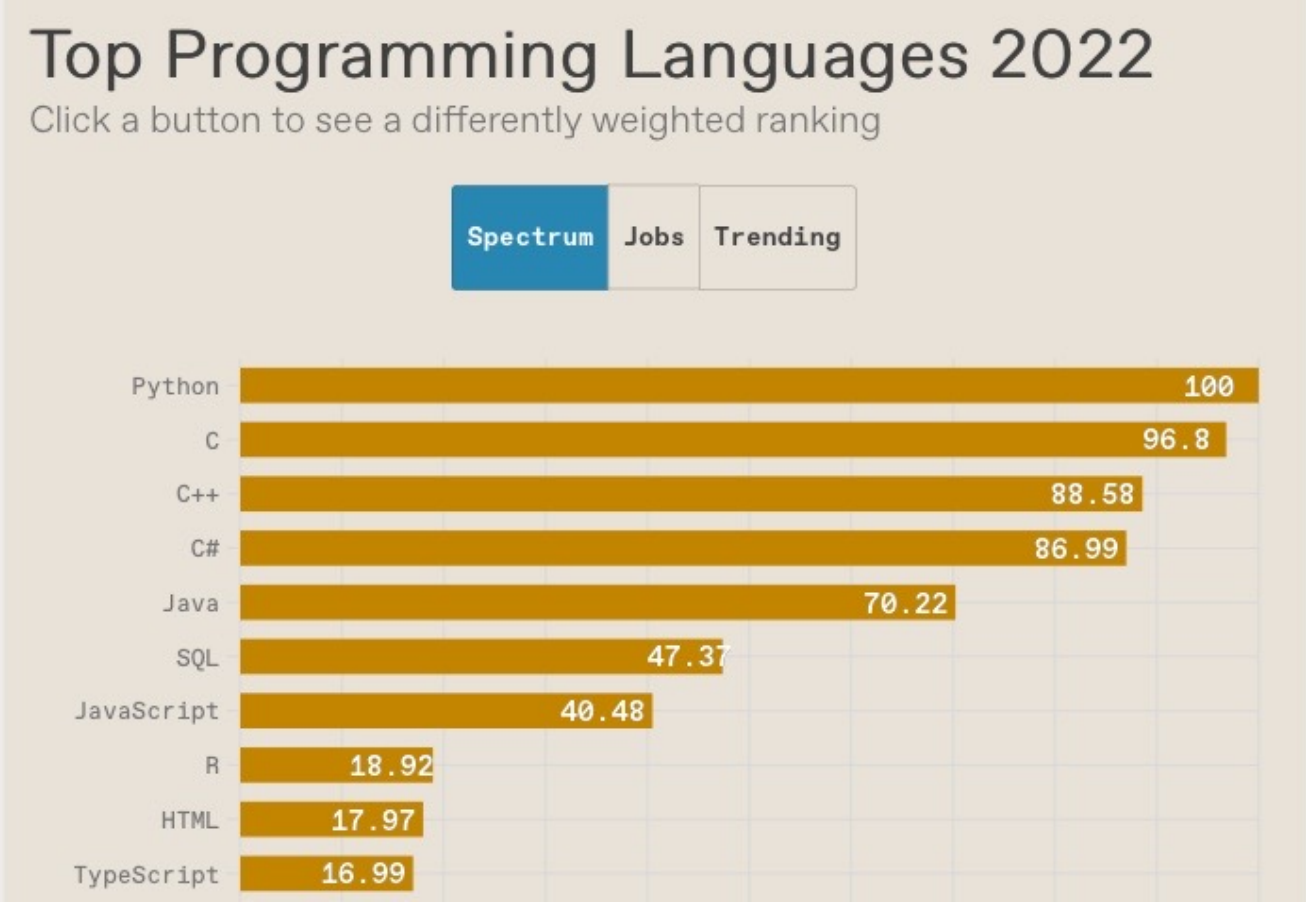
IEEE Spectrum

- Sources include GitHub, Google, Stack Overflow, Twitter, and IEEE Xplore.
- *Spectrum:* heavily weighted toward the interests of IEEE members



https://spectrum.ieee.org/top-programming-languages/

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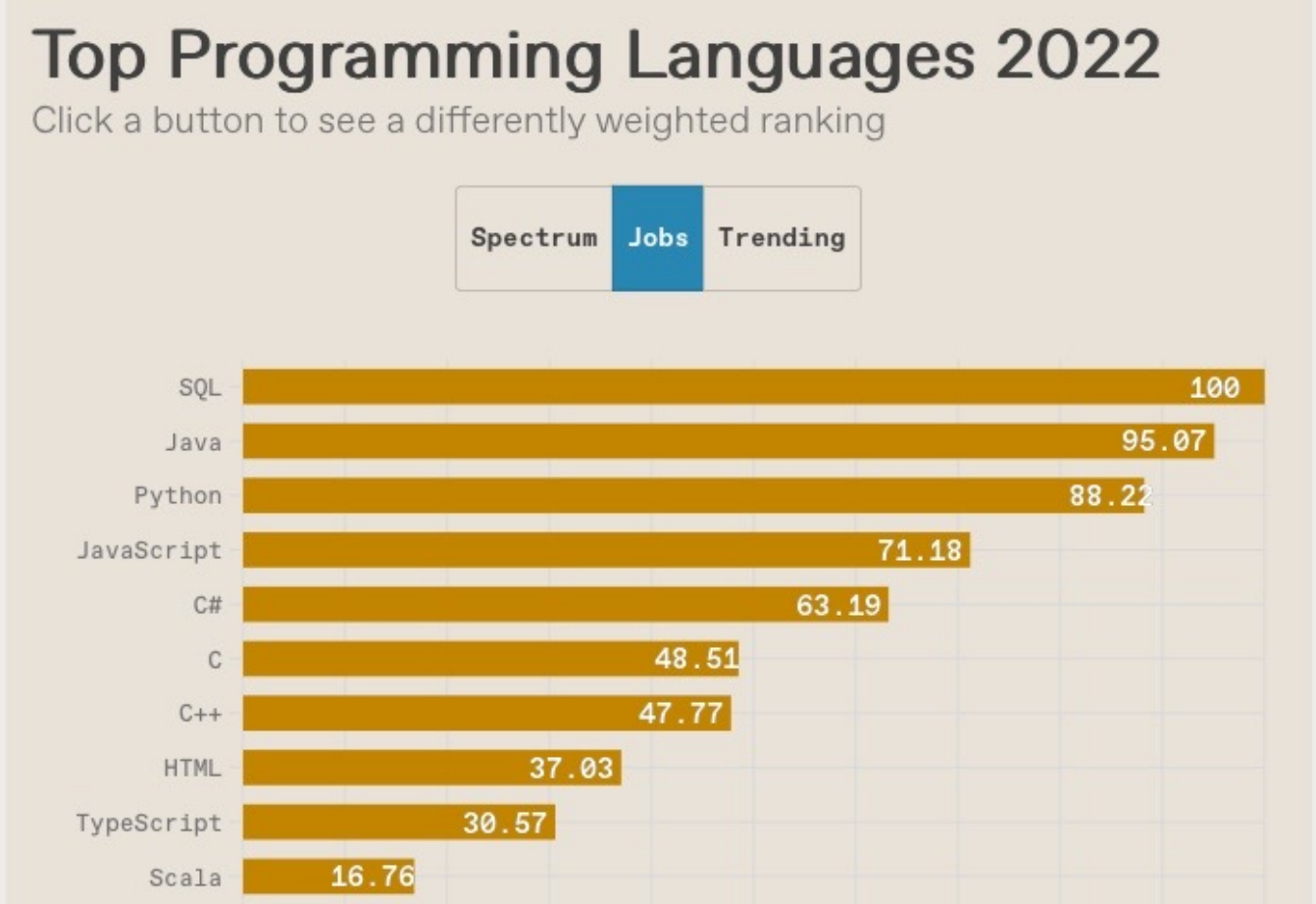
IEEE Spectrum (Jobs)

- Sources include GitHub, Google, Stack Overflow, Twitter, and IEEE Xplore.
- *Jobs:* Focus on Job listings.



https://spectrum.ieee.org/top-programming-languages/

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IEEE Spectrum (Trending)

- Sources include GitHub, Google, Stack Overflow, Twitter, and IEEE Xplore.
- *Trending:* more weight on forums and social-media metrics.

https://spectrum.ieee.org/top-programming-languages/

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Part 2

Balloon Debate

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Balloon Debate

1. We get a number of people up front representing their favourite programming language
2. Each round we take questions from the audience and each gets to answer in turn

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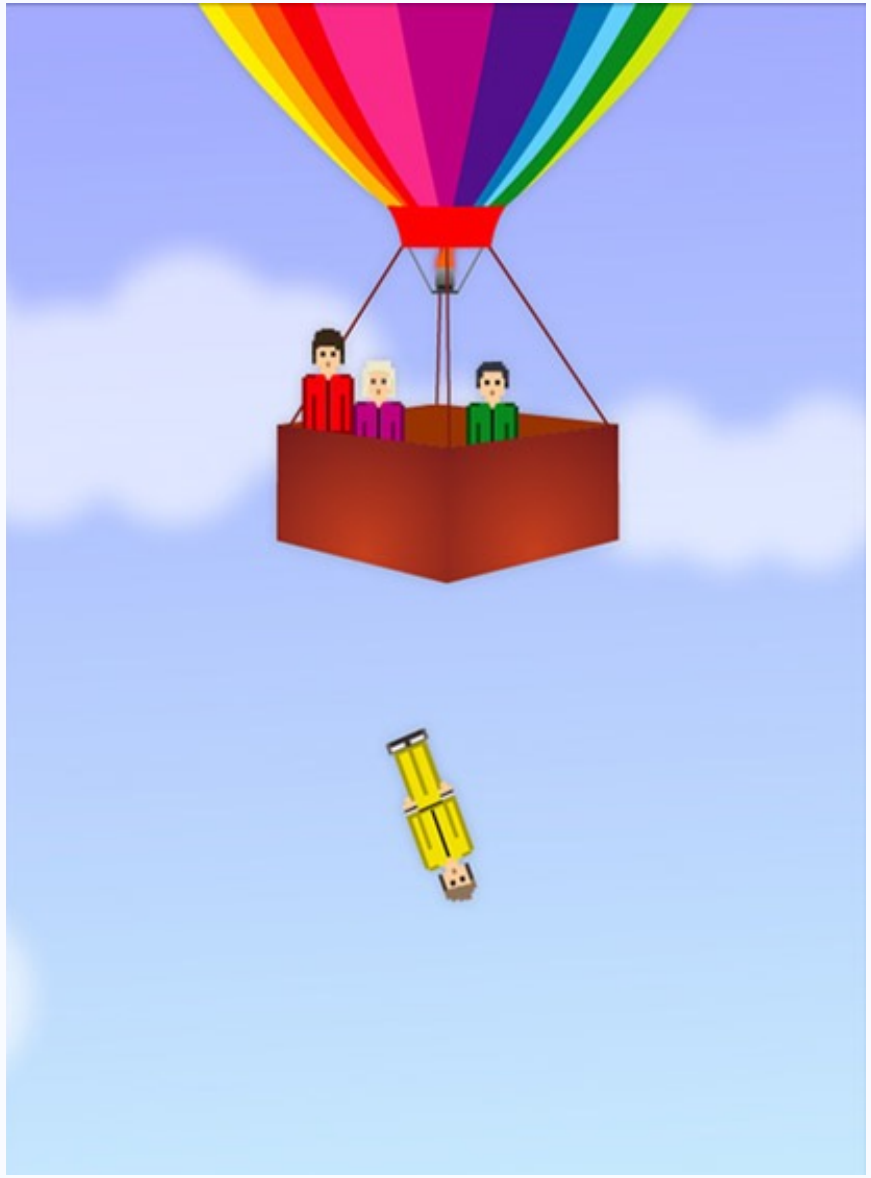
Balloon Debate

1. We get a number of people up front representing their favourite programming language
2. Each round we take questions from the audience and each gets to answer in turn
3. At the end of each round we vote off the weakest language
4. If no_lang > 1 goto 2
5. The last language is the winner!



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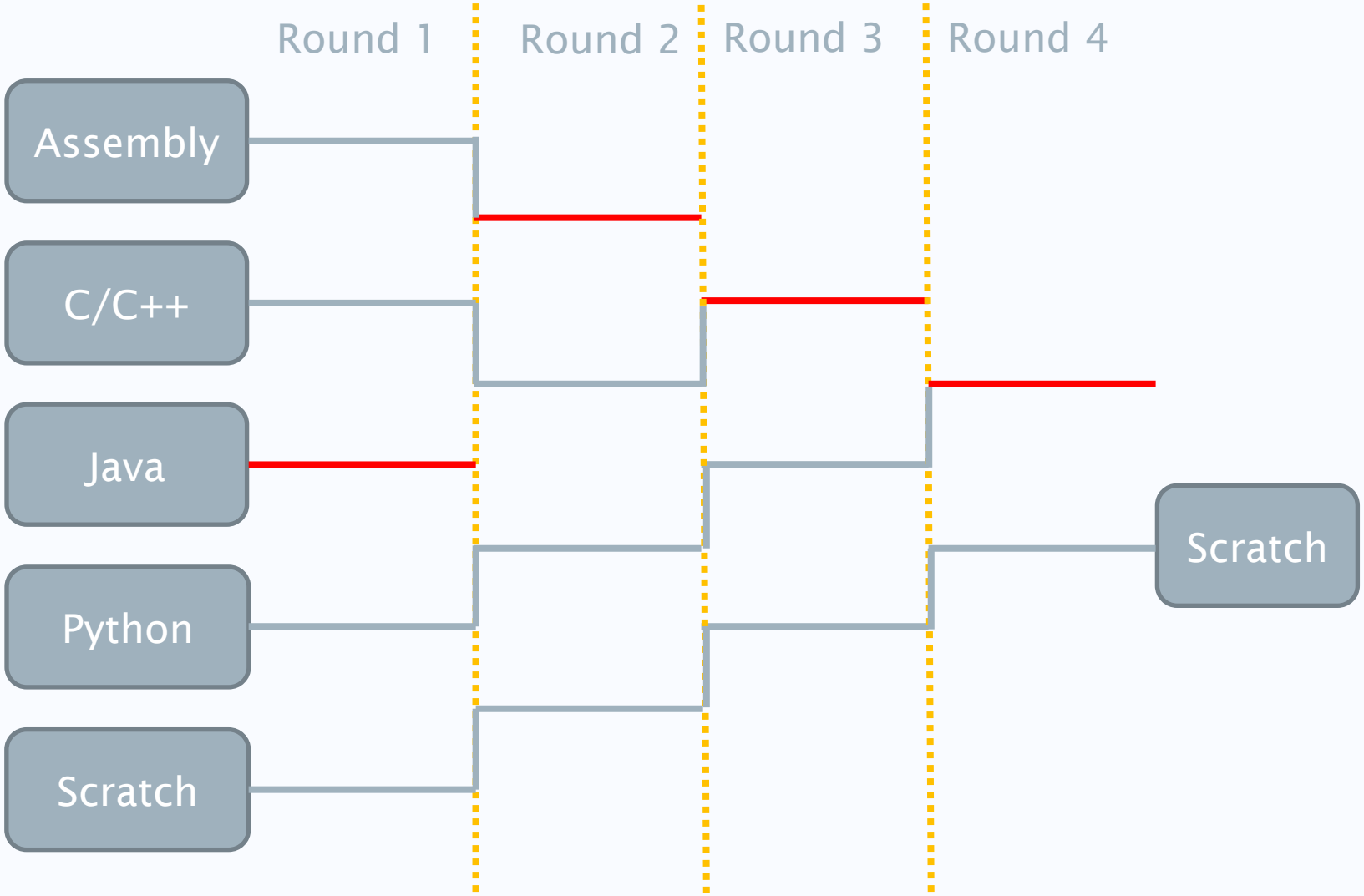
The Path to Glory (AY2019-20)



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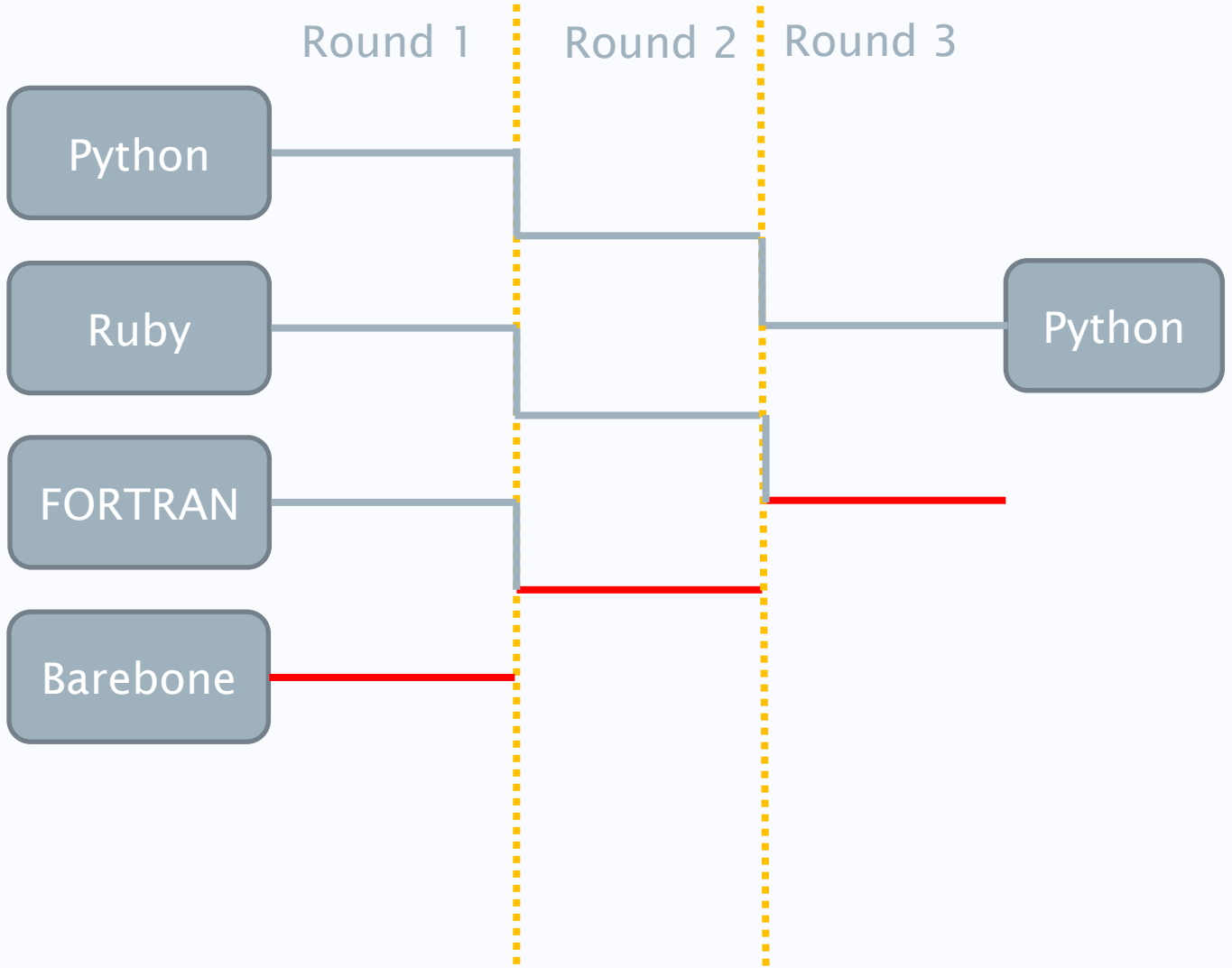
The Path to Glory (AY2020-21)



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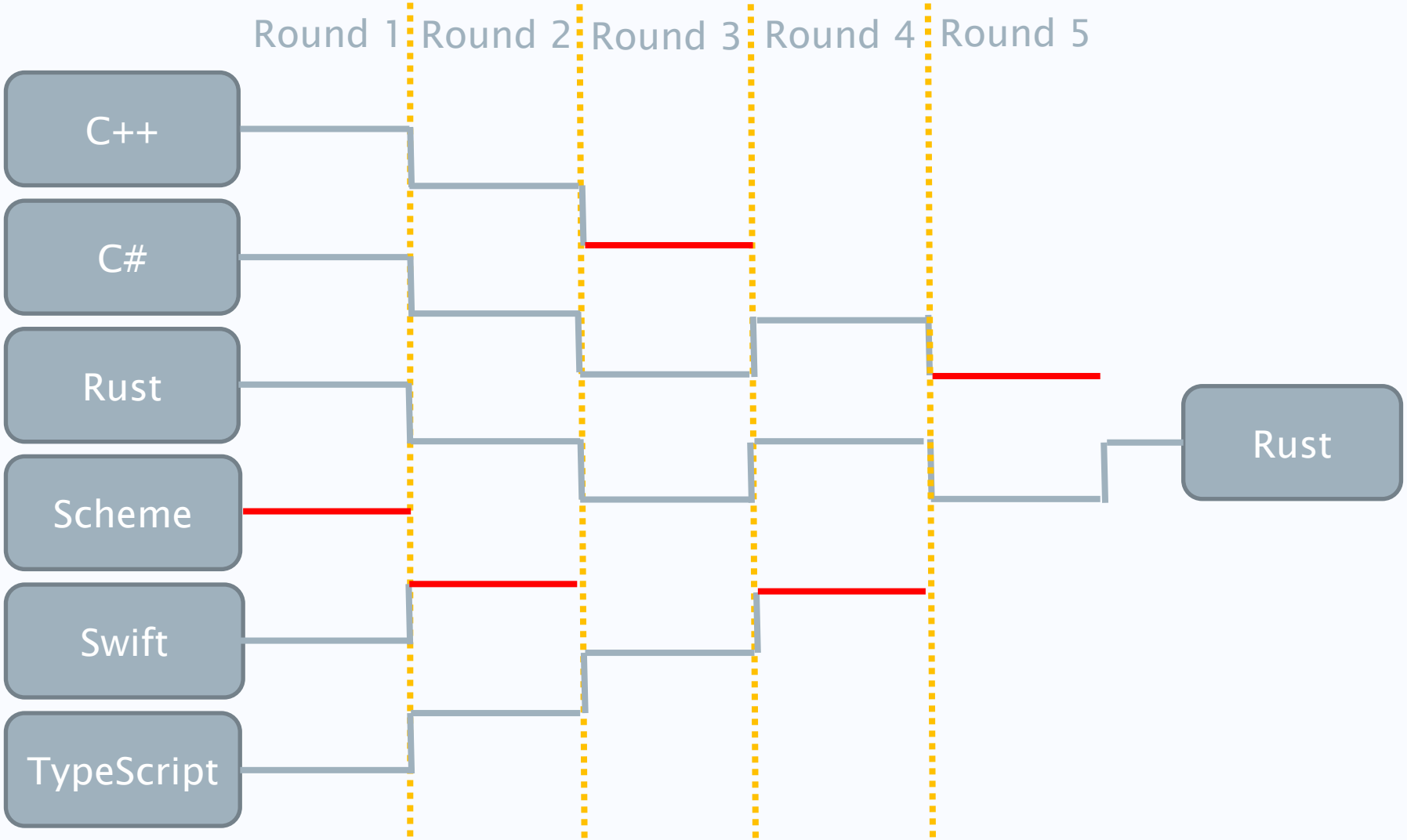
The Path to Glory (AY2021-22)



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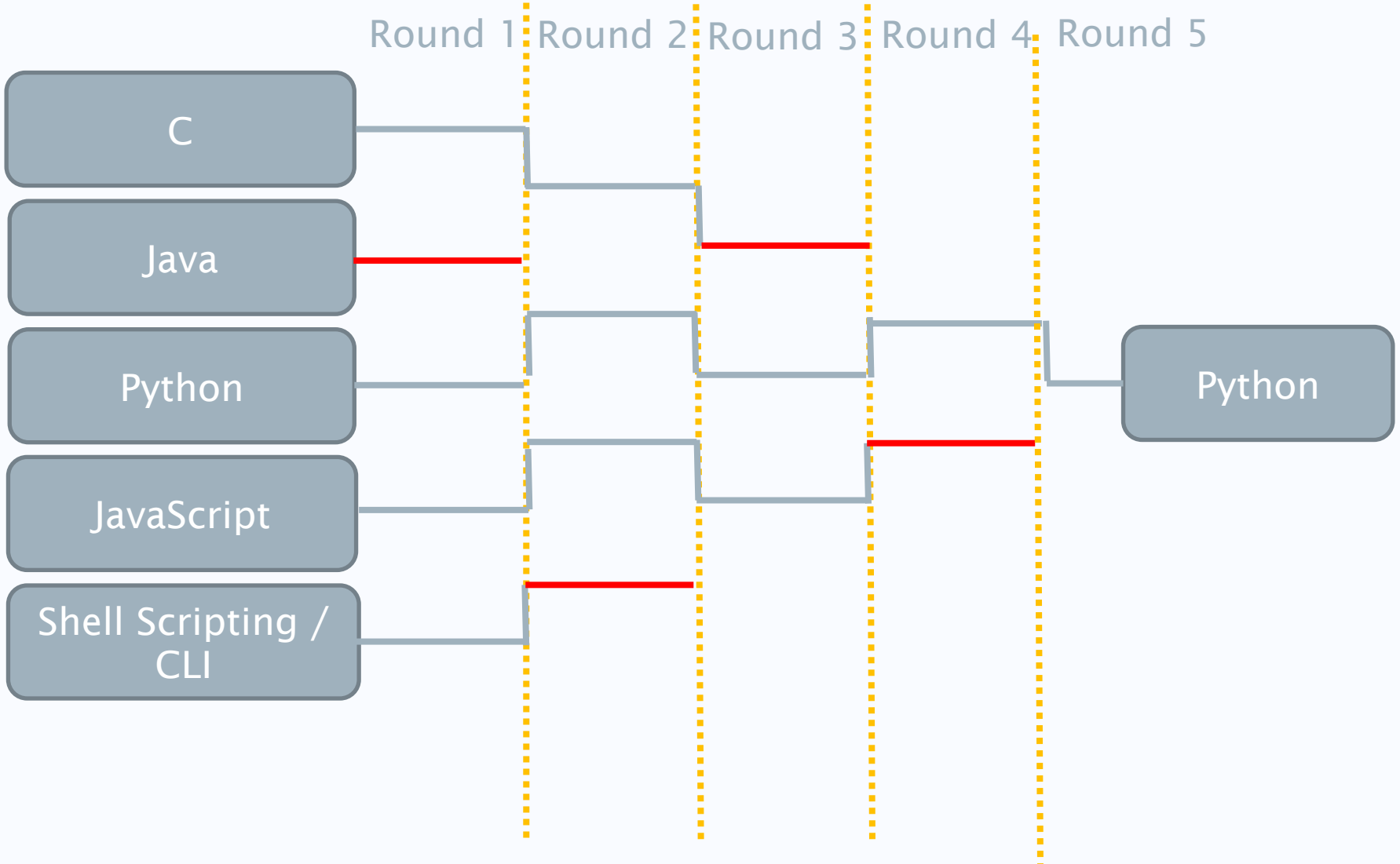
The Path to Glory (AY2022-23)



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AY2023-24 PL Champions

Champions	Programming Language
Agampodige Mendis	Python
Noureldin Hatem Elsayed Hamed	Java
Han-Xin Xu (Shayna)	C++/C
Percy Baker	Rust
Josh Stevenitt	Scratch

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Part 3

Summary

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The 4 most hated Programming Languages

"The hate for a language is directly proportional to the popularity, so the most hated also tends to be the most popular or the most threatening,"

Tom Hatch

(director of engineering of VMware)

https://www.techrepublic.com/article/the-4-most-hated-programming-languages-experts-pile-on-javascript-c-and-more/

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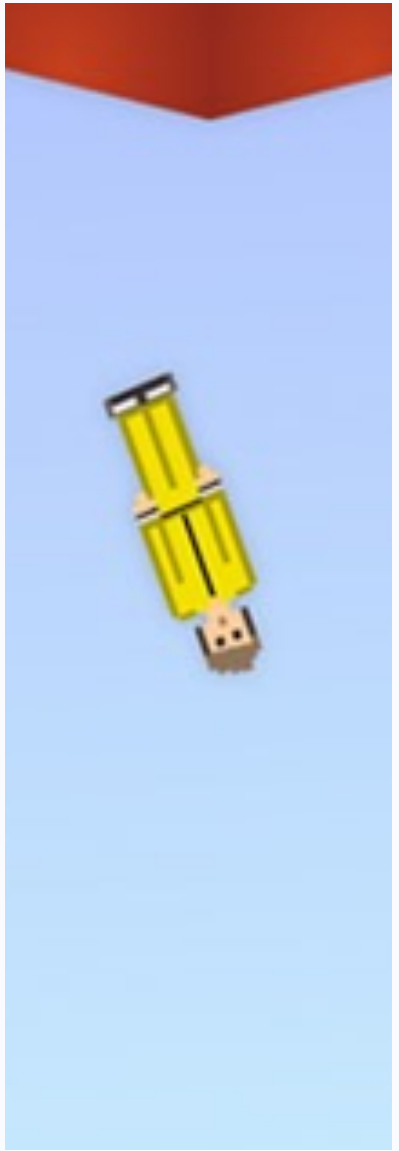
Summary

- You will never learn all the programming languages out there
- This doesn't matter if you know:
  - a handful of languages
  - a variety of paradigms

- Programmers aren't just good at programming
- They are also good at *learning to program*



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YOUR QUESTIONS

Hope you enjoy the debate