



Web Development Comparison

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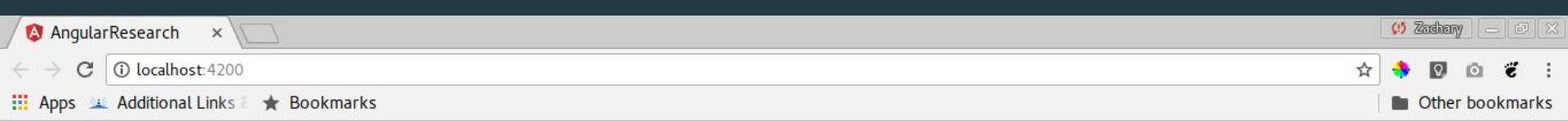
Significance and Background

- Overwhelming amount of web development tools
- New learners paralyzed by choices
- Web development expected to grow 27% in next 10 years (U.S. Bureau of Labor Statistics)[1]
- Necessary for current job market.

[1] “Web Developers: Occupational Outlook Handbook: U.S. Bureau of Labor Statistics.” [Online]. Available: <https://www.bls.gov/ooh/computer-and-information-technology/web-developers.htm>.

Objective

- Present a comparison of three JS-based web development platforms that would assist in helping a new developer choose the right tool for the job.
- Benchmark load times, test different browsers, keep environments the same otherwise. Incorporate resources used for each framework/library.
- Avoid influence from the coder. Keep it simple.



Hello, World!

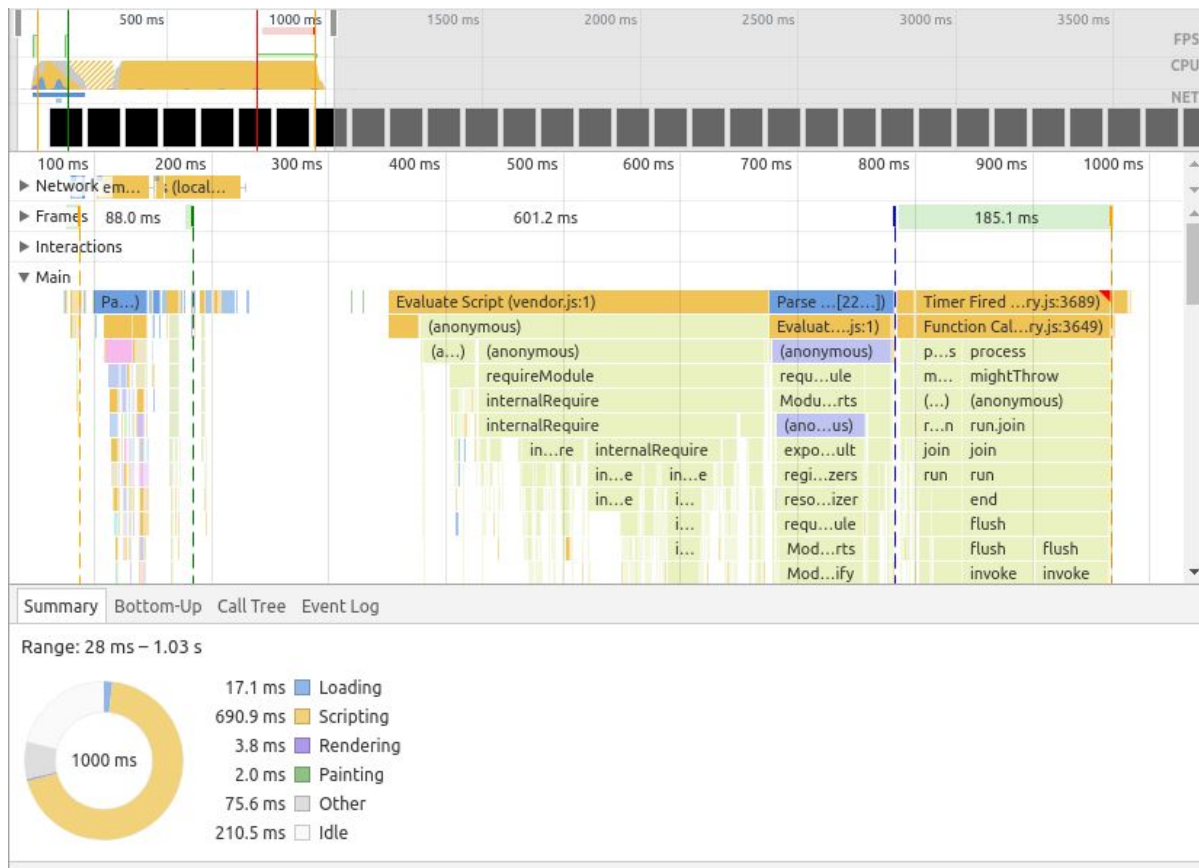
Materials / Methods

- Angular 2, React, Ember
- HTML, CSS, JavaScript
- Visual Studio Code
- Developer Tools in Chrome / FireFox
- Laptop running Ubuntu

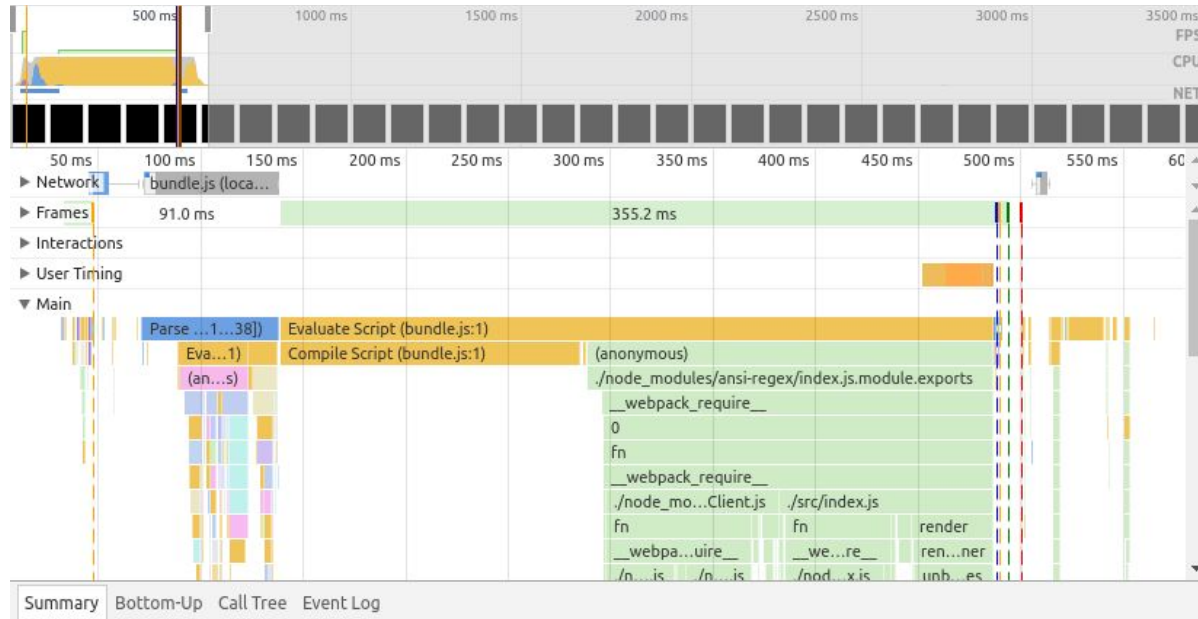
Angular



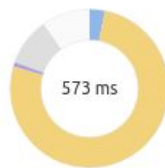
Ember



React



Range: 7 ms – 580 ms

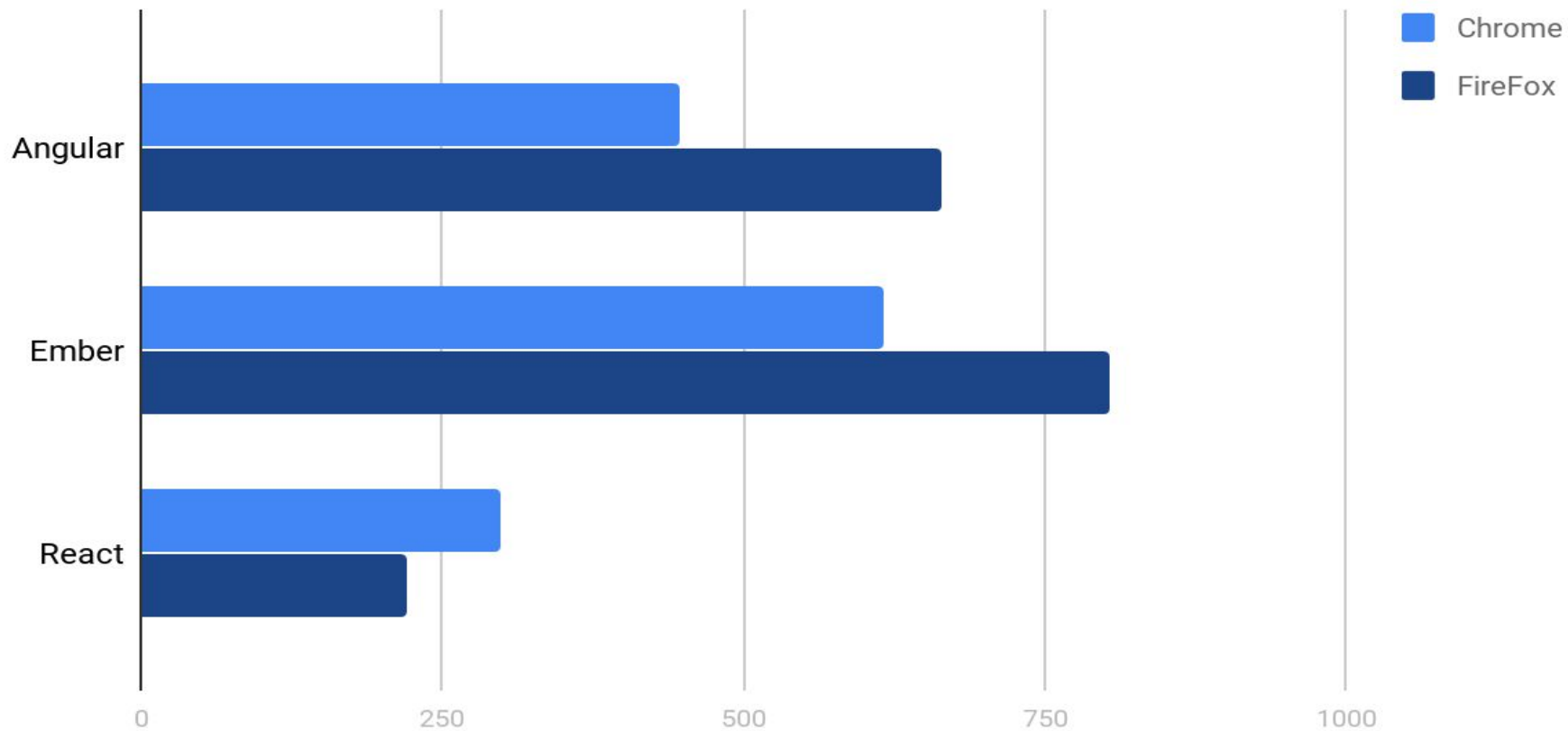


- 17.9 ms Loading
- 437.8 ms Scripting
- 4.2 ms Rendering
- 1.0 ms Painting
- 55.7 ms Other
- 56.2 ms Idle

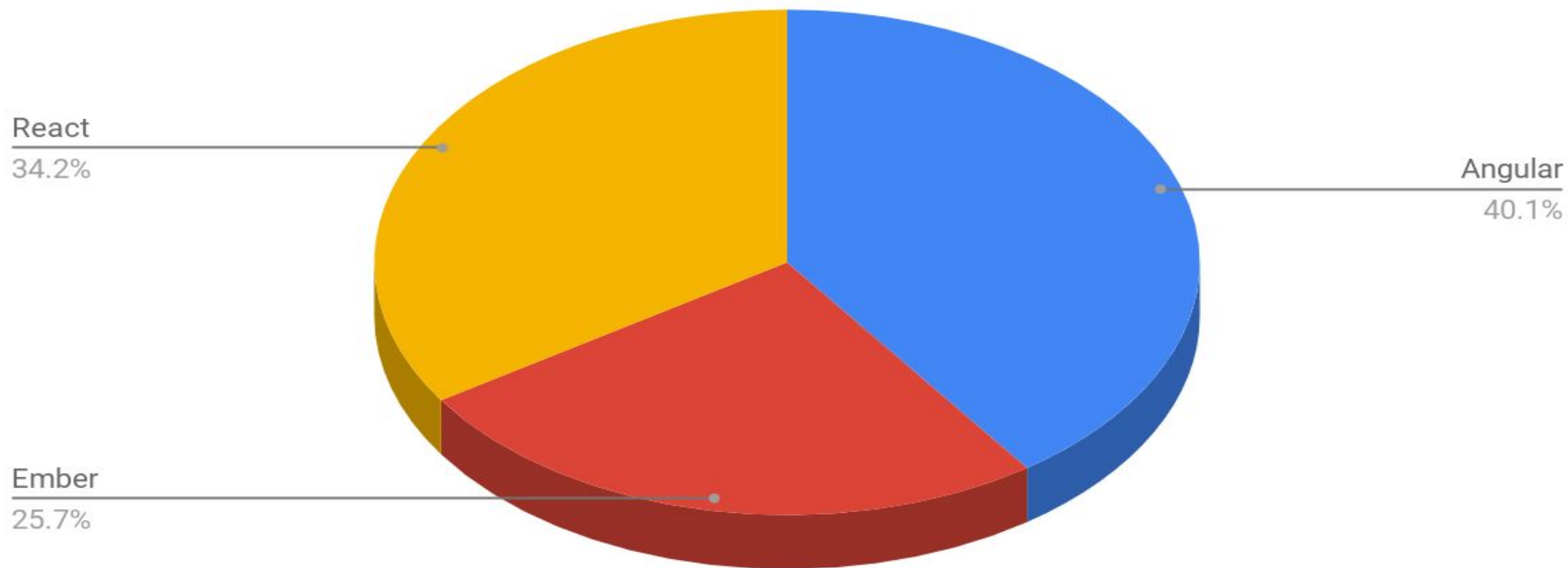
Results

- In FireFox and Chrome, React performed the best, while Angular came in second. Ember performed the least efficiently.
- React performed similarly in both browsers, but had a long idle time (3000 ms) in Chrome.
- Angular performed better in Chrome by around 200 ms.
- Ember performed better in Chrome by around 200 ms.
- Directory sizes: ~10,000 Item difference between Ember and Angular. React Close to Angular, slightly less.

Load Times (MS)



Directory Size (MB) - 109/145/170



Summary / Conclusion

- Ember uses the least amount of resources; Lightweight
- React performs best out of the 3
- Angular was most difficult to work with
- HTML, CSS, and Vanilla JavaScript should be first choice
- There is no best solution early on
- Research local job market