

ELM

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— WHAT IS IT?

- Designed for creating reliable web front-ends
- Compiles to JavaScript
- Functional, statically typed language

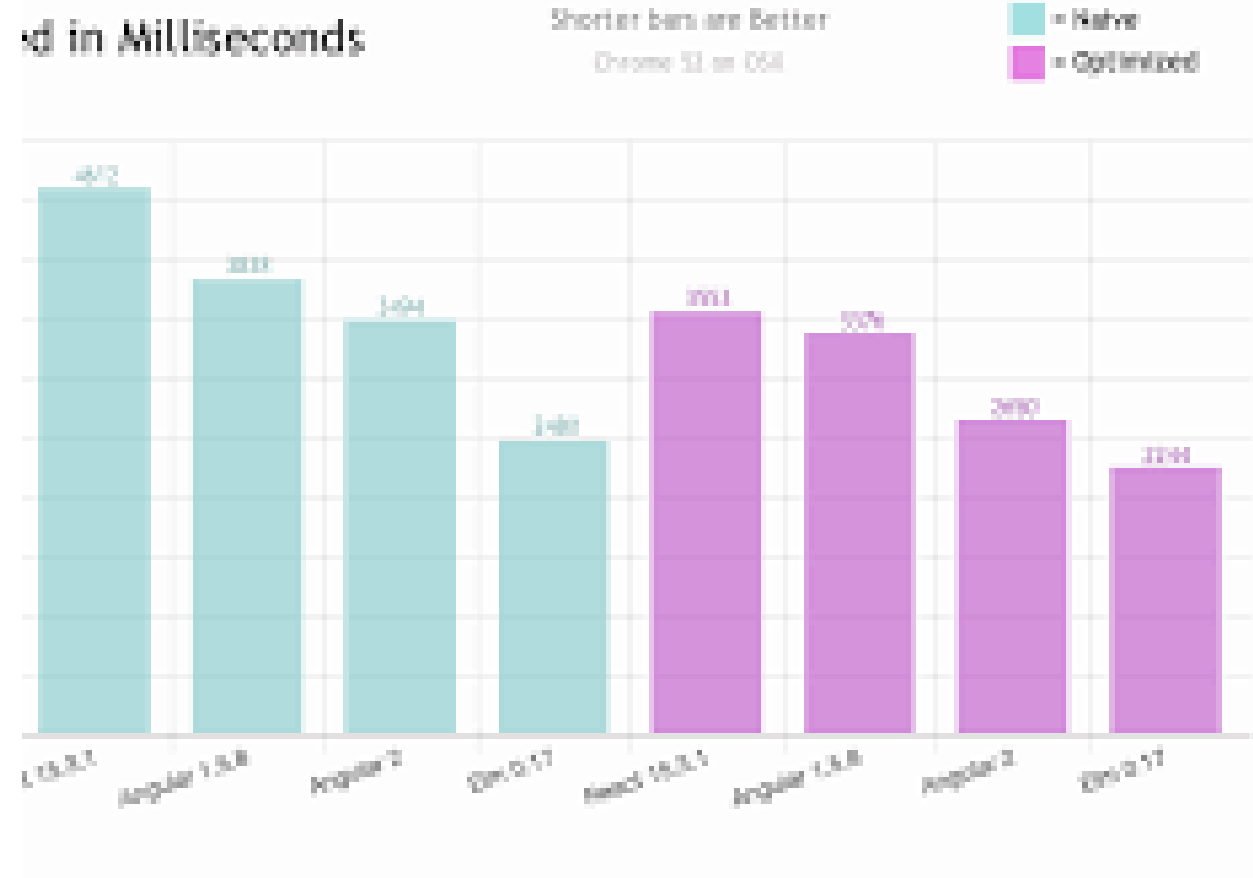
BACKGROUND

- Developed by Evan Czaplicki
- Grew into a mature ecosystem with its own architecture
- Influenced other tool like Redux, The Elm Architecture, and Typescript patterns
- Competitor for JavaScript



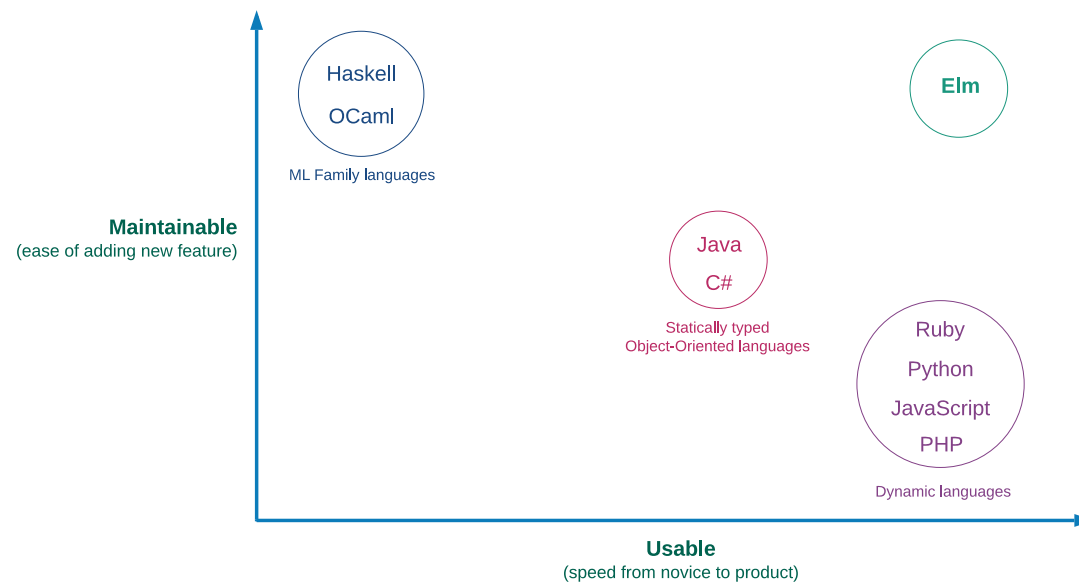
WHY ELM?

- No runtime exceptions
- Useful compiler messages
- Immutable data & pure functions
- Great performance



KEY FEATURES

- Strong static typing with type inference
- Pure functional programming
- No nulls
- Uses virtual DOM for Optimized rendering
- Extremely small bundle sizes



— COMPARISON TO JAVASCRIPT

- Pure, functional
- No runtime errors
- Predictable architecture
- Friendly compiler
- Multi-paradigm, dynamic
- Common runtime errors
- Competing frameworks
- Linear + Manual debugging

STRENGTHS & LIMITATIONS

- Extremely reliable
- Saves time on debugging
- Fast performance
- Simple mental model
- Small ecosystem
- No direct access to JS
- Smaller developer community