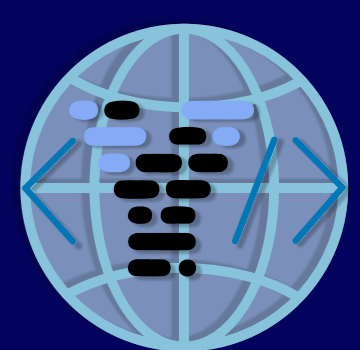


# Portable Development Environment for YARA-X



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 Technical advisors: Ing. Tomáš Ďuriš and Ing. Marek Milkovič

## Objectives

- Development environment as a **supplementary tool** for web services.
- Develop a **web component** that provides a code editor with **built-in support** for YARA language.
- Offer as many language features as possible in the web environment **without a remote server**.
- Contribution to the development of the **YARA-X project** and the replacement of **existing tools**.

## Outcome

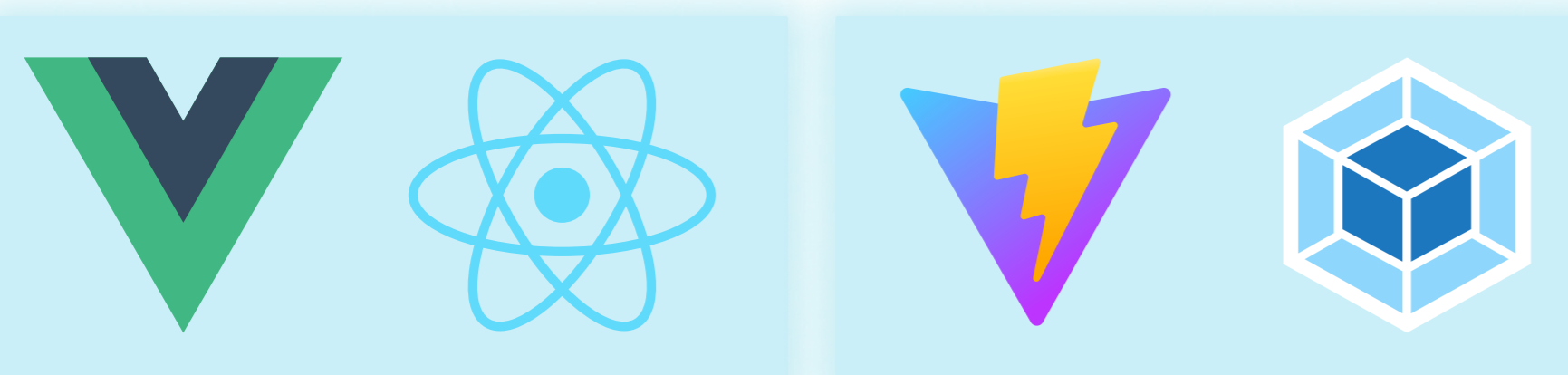
# 13

language features

# 35

lint rules

- Various **optimizations** achieved by caching syntax trees.
- A simplified **programming interface** for interacting with the code editor.
- Compatible with **frameworks** and **bundlers**.



## Design



Figure 1: Developed software components and their utilization

## Impact of the thesis

### Language server is open source

**Victor M. Alvarez** @plusvic  
 I'm happy to introduce the official YARA language server for Visual Studio Code. [virustotal.github.io/yara-x/blog/in...](https://virustotal.github.io/yara-x/blog/in...)  
 Many thanks to Albert Tikaiev for putting the first stone in this initiative ([github.com/prosperritty](https://github.com/prosperritty))  
 12:43 PM · February 3, 2026

Figure 2: Author of the YARA-X project introduced the language server

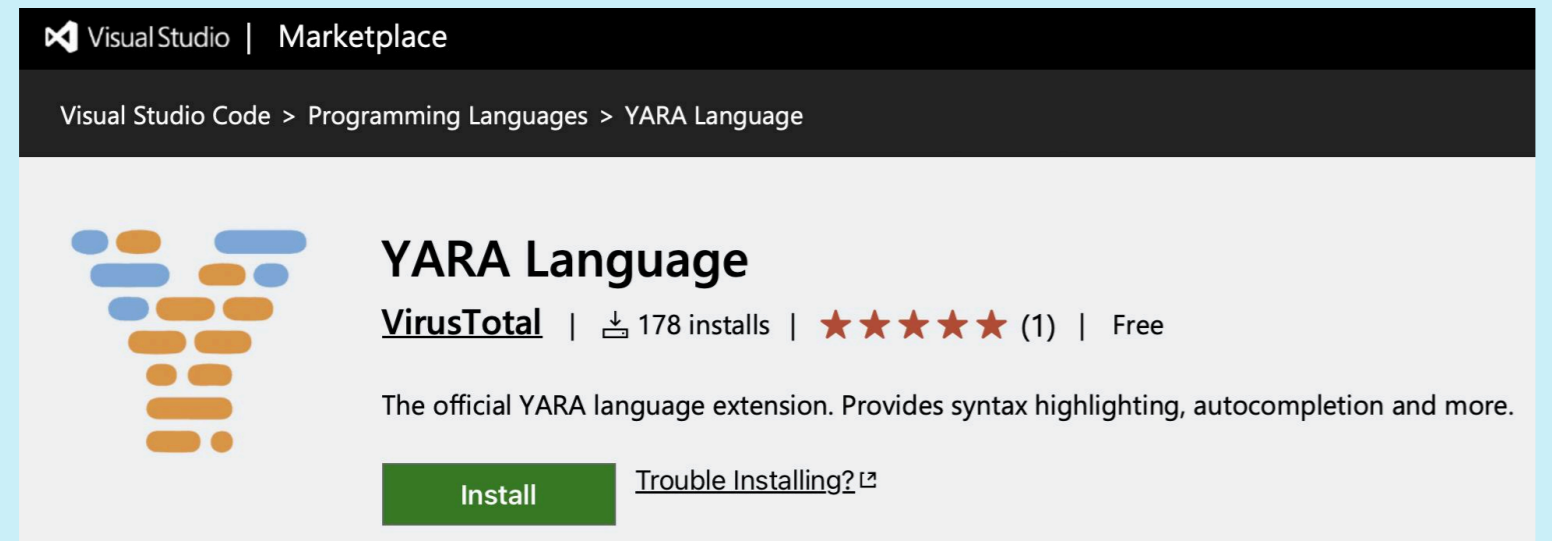


Figure 3: Official extension for VS Code

### Average response time (ms)

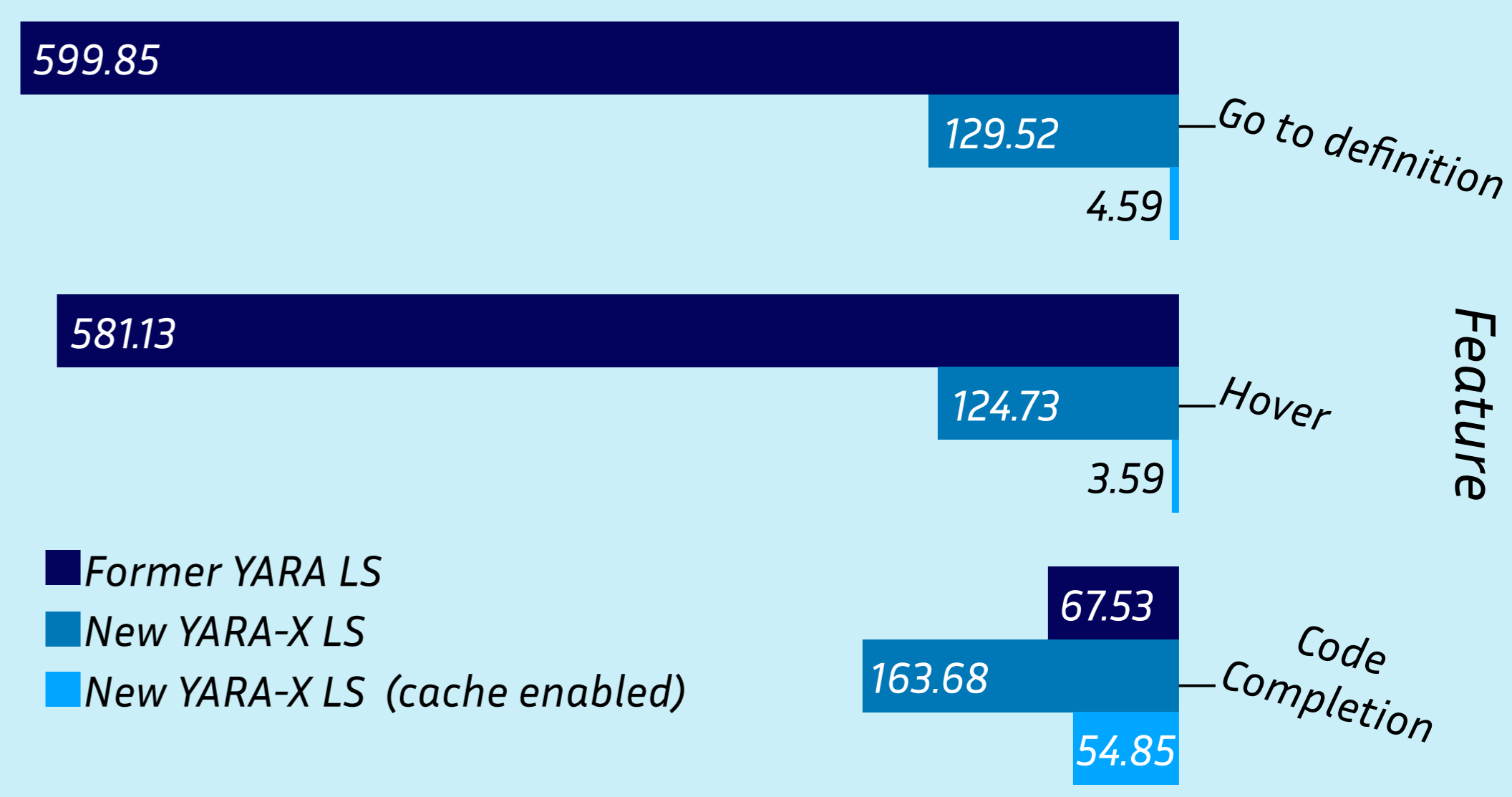


Figure 4: Performance comparison of individual language features