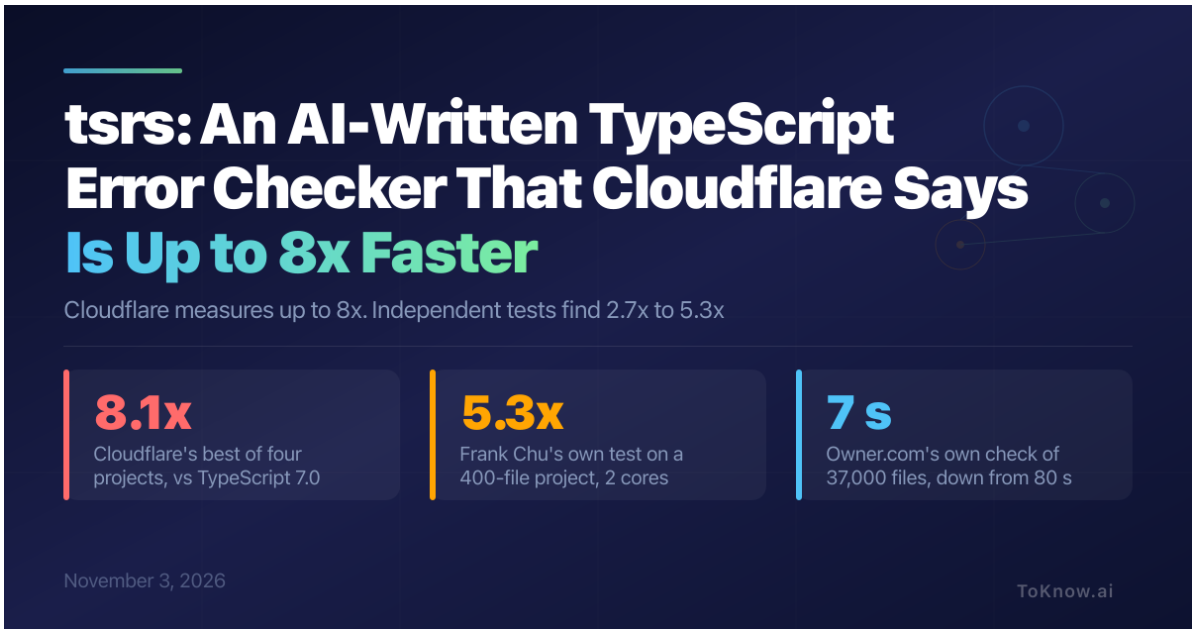
tsrs: An AI-Written TypeScript Error Checker That Cloudflare Says Is Up to 8x Faster

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Read at ToKnow.ai



tsrs is an open-source program that checks TypeScript code for mistakes, for developers and AI coding agents that wait on it during builds. TypeScript adds type labels such as "number" to JavaScript, and the checker flags mismatches before the code runs. Microsoft's TypeScript 7.0 uses a checker rewritten in the Go language. Cloudflare and VoidZero work with Max Schwenk of Owner.com on tsrs, a rewrite in the Rust language. Cloudflare says tsrs is up to

8x faster and uses about 70% less memory than that checker when both use the same number of parallel workers. On Cloudflare's chart, four projects run 3.8x to 8.1x faster.

Cloudflare says Rust lets the checker run in a browser tab, where a Go version must bring its own memory cleaner. Independent tests find smaller speedups. Frank Chu measured 5.3x faster and 72% less memory against TypeScript 7.0.2 on a 400-file test project, on two cores with default settings. ImportStatic measured about 2.7x against the newer 7.1 beta on TypeScript's own source. Microsoft's Daniel Rosenwasser replied that much of the speed is not about the language, and some 7.1 speedups come from tsrs.

Schwenk says he wrote no code. Anthropic's Claude Opus 5.5 and 20-plus helper agents built a working checker overnight, graded by TypeScript's 15,197 test cases. Owner.com says its 37,000-file backend check fell from 80 seconds on one thread to 7 seconds in its build pipeline. tsrs has no stable release, and its watch mode (rechecking on save) does not run on Windows.

Read More: VectorCraft, a free Rust rebuild of Illustrator that Gizmodo reports was built with Claude Opus 5.5 and WordCraft and its siblings, free Rust rebuilds of Word, Excel and AutoCAD that an AI agent can drive

Sources:

- Introducing tsrs: A port of TypeScript to Rust (Cloudflare)
- tsrs: Rust port of the TypeScript 7 type checker (GitHub)
- tsrs: a Rust port of TypeScript, written entirely by agents (Owner.com)
- "We are not forking TypeScript": Cloudflare spearheads Rust port written by agents, for agents (The New Stack)
- Cloudflare says its Rust TypeScript port is 8x faster. I measured 5.3x and 72% less memory. (DEV Community)

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