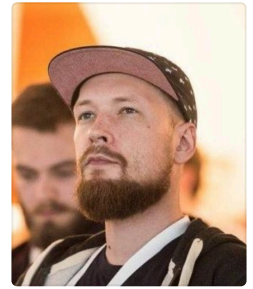


Sergey Rubanov



Building **AI agent runtimes**, **web runtimes** & **developer tools** — at the boundary of spec text, engine internals, and developer-facing APIs.

✉ hello@sergey.works 🌐 sergey.works 🐙 chicoxyzy 🌐 chicoxyzy 🐦 sergey.works ✂ chicoxyzy

01 Profile Software engineer, independent researcher, and open-source contributor focused on AI agent infrastructure, the web platform, and developer tools.

Contributes to **TC39** and **W3C** standards work at the boundary between specification text, implementation behavior, and developer-facing APIs.

02 Core Skills

AI / LLM SYSTEMS agent orchestration prompt/tool flows model routing

eval & quality-regression harness llama.cpp MCP/ACP

RUNTIMES / STANDARDS ECMA-262 TC39 Test262 WebAssembly JavaScriptCore WebKit

browser/webview runtimes

LANGUAGES TypeScript Go C++ Zig

PLATFORM / OBSERVABILITY OpenTelemetry traces/metrics/logs Prometheus Grafana

OTel Collector Docker Kubernetes Terraform AWS GCP

Cloudflare

03 Selected Projects

Hecate — AI RUNTIME CONSOLE

Local-first AI runtime console for cloud/local models and Hecate Chat. Supervised coding-agent sessions, task approvals, usage visibility, and OpenTelemetry.

Stack Go · TypeScript · React · Tauri · SQLite · OpenTelemetry

🌐 hecate.sh . 🐙 github.com/hecatehq/hecate

Cynic — ECMASCRIPT ENGINE

Strict-only ECMAScript engine in Zig for non-browser hosts such as edge JS, Workers, and server-side JS.

Stack Zig · ECMAScript · Test262 · compiler/engine internals

🌐 sergey.works/cynic . 🐙 github.com/chicoxyzy/cynic

Pragmatist — AGENT AUDIT PLATFORM

Agent audit platform with verifiable findings for ECMA-262, TypeScript, and JavaScript engines.

MCP audit tools, parsed spec queries, Coq/Rocq mechanization, TypeScript parser/lib diffs, multi-engine differential runs, test262/spec patch scaffolds, and a five-gate finding verifier.

Stack TypeScript · Coq/Rocq · ECMA-262 · tsgo · Zod

Release coming soon.

tc39-mcp — MCP SERVER

Structured MCP access to TC39 specs, turning ECMA-262 and ECMA-402 into clause-level, SHA-pinned data for agents and tools.

AOID-aware search, cross-spec references, edition diffs, git history, test262 and proposal lookup, offline stdio, and hosted HTTP.

Stack TypeScript · ECMA-262 · ECMA-402 · Cloudflare Workers · VitePress · Zod

🌐 tc39-mcp.chicoxyzy.workers.dev . 🐙 github.com/xyzyzylabs/tc39-mcp

Independent Software Engineer / Consultant

BARCELONA

Sep 2025 – Present

AI runtimes, web platform standards, developer tools, observability, and open-source runtime projects.

- Build AI/runtime and developer-tooling systems across LLM gateways, agent-task runtimes, web standards, JavaScript runtime internals, and observability.
- Design operator-facing reliability controls for agent systems: provider health/readiness, route diagnostics, trace links, usage/cost visibility, policy boundaries, approvals, and sandbox-aware execution.
- Contribute to TC39/ECMA-262 and Test262 by analyzing proposal trade-offs, refining specification text and semantics, and collaborating with browser vendors, JS engines, and the standards community.
- Work independently in ambiguous, research-heavy spaces: turn loosely defined agent/runtime ideas into usable tools, documentation, release paths, and test loops.

Invited Expert · TC39

May 2019 – Present

- Co-authored the **Promise.any** proposal and contributed editorial improvements to ECMA-262.
- Participate in proposal discussions, evaluate compatibility and ergonomics trade-offs, and develop Test262 tests to validate JavaScript behavior across engines.

Software Engineer · Firetiger

US · REMOTE

May 2024 – May 2025

Joined Firetiger after the acquisition of Dispatch.run; initially spent four months at Dispatch.run.

- **Dispatch.run**: owned the CLI for the Durable Functions platform, improving developer experience and local-to-cloud workflow reliability.
- Researched deployment approaches for running Go code through WebAssembly on Cloudflare.
- **Firetiger**: contributed to the telemetry product across core features, infrastructure, and OpenTelemetry compatibility.
- Supported early customers through onboarding, troubleshooting, integrations in Python/TypeScript, Vercel support, and Kubernetes/Terraform deployment workflows.

Stack Go · Python · TypeScript · Node · Next.js · Vercel · Docker · Kubernetes · Terraform · AWS / GCP / Cloudflare · OpenTelemetry / Prometheus / Grafana / OTel Collector

Software Engineer · Socket Supply Co

US · REMOTE

Mar 2022 – Jan 2024

- Developed core Socket Runtime components in C++ to improve execution stability and platform behavior.
- Enhanced JavaScript APIs for Node.js compatibility and native capabilities across mobile and desktop runtimes.
- Built tooling to streamline developer workflows and reduce setup friction.

Stack C++ / C / Objective-C++ · JavaScript / TypeScript · Node.js · WebKit- and Chromium-based webviews (WKWebView, libwebkit2gtk, WebView2)

Software Engineer · RealAdvisor

GENEVA · REMOTE

Dec 2019 – Sep 2021

- Developed a multi-tenant CRM and a custom document editor with layout templates to reduce manual formatting effort.
- Optimized the document rendering pipeline to improve load times and editor responsiveness.

Stack React / Svelte · Flow · Node.js · Relay · Docker + Composer · Headless Chromium · GCP

Frontend Developer Lead · EXANTE

MALTA · REMOTE

Dec 2014 – Aug 2019

- Led development of a web trading terminal, Chrome extension, Ledger hardware-wallet applications, and web3/cryptocurrency projects.
- Mentored and interviewed web developers while leading delivery across React/Preact, TypeScript, RxJS, D3, Redux/MobX, and browser-extension work.

Stack React/Preact · Redux/MobX · RxJS · D3 · TypeScript · C

Senior Developer · NPTV

MOSCOW · RUSSIA

Oct 2013 – Nov 2014

- Built a React-Native-like JavaScript SDK for an interactive TV platform; helped adopt SpiderMonkey and later migrate to V8.
- Managed build systems, DevTools extensions, and R&D for client applications.

Stack JavaScript · Babel · React · Chrome DevTools extensions

Frontend Team Lead · KM Media

MOSCOW · RUSSIA

Sep 2012 – Jul 2013

- Led frontend team to deliver the frontend for an advertising platform.
 - Established unit testing with Karma and Jasmine to reduce frontend defects and regression frequency.
 - Coordinated with backend and product teams to resolve integration issues and improve data accuracy.
- Stack Angular · JavaScript

Senior Developer · Comfortel

ORYOL · RUSSIA

Sep 2009 – Jul 2013

- Built a CRM-like system with integrations for call-center software: Genesys Agent Desktop and Oktell.
 - Promoted to Team Lead in 2012; led a team to implement a CRM system, enhancing client interactions and driving measurable improvements.
 - Developed a dynamic web-based operator-script generator, streamlining call-center operations and reducing response times.
 - Managed and optimized databases (MySQL, MSSQL, Oracle), ensuring data integrity and system performance for critical applications.
- Stack PHP · JavaScript · MSSQL · MySQL · OracleDB

Master of Computer Science · Oryol State Technical University

ORYOL · RUSSIA

2009

Languages — Russian (Native) · English (Proficient) · Spanish (Novice)

06

Education &
Languages