VLADIMIR SOUS

Senior Software / Systems Engineer

TypeScript · Frontend / Full-stack Architecture · Real-time & AI Systems

Brno, Czech Republic
+420 775 335 001
v.sous84@gmail.com
linkedin.com/in/vladimir-sous
vsous.cz

Senior Software / Systems Engineer and independent contractor focused on TypeScript, frontend/full-stack development, real-time applications and AI workflows.

PROFILE

I can help you take a feature or a larger part of a product from the initial problem through deployment — from user interviews and UX design through user flows, components and implementation to testing and further development. For more than 10 years, I have worked on production web, enterprise and industrial applications where the technical design must be connected to how the solution will actually be used.

I focus on carefully completing details, consistent application behaviour and validating the entire flow, not just the code itself. I can lead frontend development, modernise large applications, work with real-time data, monorepos, CI/CD and AI workflows, while maintaining a consistent UX/UI design across the entire product.

Thanks to my previous experience designing utility networks and building-services systems, I approach development from a technical and practical perspective — I care not only whether a solution works, but also whether it is properly designed, tested, maintainable and usable in real-world operations.

CORE EXPERTISE

Solving complex problems
I help identify where the real problem lies, what is unnecessarily complex and what may start slowing future development. I break complex assignments into smaller parts and look for solutions that are simpler, more stable and easier to maintain.

Reliability and security
Together, we will design the application so that a failure in one part does not take everything else down. Secure software starts with good design: appropriate authentication and authorisation, type and input validation, encryption of sensitive data, and safe handling of forms and service-to-service communication.

Performance and real-time responsiveness
When an application processes data in real time, it must respond immediately even under heavy load. A production machine can generate thousands of events in a single second, and a small delay can stop production. These are the situations that show whether a solution is designed well.

Clear direction and rules
A clear direction and explicit rules from the beginning are an essential part of a successful project. Under pressure, rules are not a burden but a support: they help a team decide faster and maintain quality. Tests and automated checks make sure those rules continue to hold when there is no time to do everything manually.

Human in the loop
AI can accelerate work significantly, but responsibility for important decisions must remain with people. I design workflows in which AI prepares inputs and suggestions, while a person verifies, completes or stops the result at critical points before it affects pricing, customers or operations.

Grounded in reality
Most of my career has been spent building things with a direct impact on real operations — from utility networks and production machines to software. In construction, a design error can cost millions; software follows the same principle. I therefore consider context and consequences before a small mistake becomes a major problem.

LANGUAGES

- Czech — native speaker
- English — C1, daily professional communication in technical and international environments

COLLABORATION

- I work as an independent contractor / self-employed professional and am looking for long-term B2B engagements, ideally remote with in-person meetings as needed. I do not consider this a fixed condition, though — the form, scope and mode of cooperation can always be agreed according to the project and situation.

PROFESSIONAL EXPERIENCE — SOFTWARE

NEXIS — AI orchestration for technical workflows 2025 - present

- Technical enquiries and source materials arrive across different formats and systems; manual processing makes completeness checks, source traceability and safe hand-off to subsequent steps difficult.
- I am designing NEXIS as a governed agentic system: workflow, web-tool and data-layer architecture with explicit inputs and outputs, validation points, traceable sources, explicit uncertainty and human-in-the-loop control.
- The result is one controlled flow from intake to a validated working output that a human can review, correct and approve before downstream pricing or customer communication.

  Stack: TypeScript, React, Next.js, Node.js, Fastify, PostgreSQL, Prisma ORM, pnpm monorepo, GitHub Actions, GitHub Packages, Vercel, Google Cloud, Docker, Tailscale/Aperture

Senior Frontend Developer | Vivantis a.s. 2024 - 2025

- I took ownership of modernising a large legacy e-commerce frontend where shared code needed to be consolidated, fragmentation reduced and long-term maintenance simplified.
- I introduced TypeScript, separate Git submodules and a monorepo approach for managing shared code, while consolidating the frontend server, API clients, logging, dependencies and shared packages.
- I implemented a Google Tag Manager management layer with typed TypeScript interfaces for individual tracking events, giving analytics events a consistent and verifiable contract.
- The result was a more consistent frontend architecture, clearer dependencies and safer handling of shared code and analytics events.

  Stack: Vue.js, TypeScript, Vite, TailwindCSS, Node.js, Google Tag Manager, Git submodules, monorepo

Team Leader / Senior Frontend Engineer / Lead UX/UI | Kinali s.r.o. - Mycronic (SWE) 2021 - 2023

Live demo: YouTube

- Mycronic industrial pick-and-place machines processing approximately 30 components per second needed a touchscreen interface able to continuously present machine state, production batches, materials, alarms and production progress.
- I led frontend development and designed the event-driven UI architecture with WebSocket and RxJS, a Storybook design system and UX tailored to non-technical operators.
- The result was a production application running directly on the manufacturing equipment and delivered to the fixed Productronica Munich deadline.

  Stack: Vue.js, TypeScript, RxJS, WebSocket, Vite, TailwindCSS, Storybook, SVG, Canvas

Senior Frontend Developer / UX/UI Designer | Konica Minolta IT Solutions Czech a.s. 2019 - 2021

- A real-time video analytics system needed to turn machine-learning outputs into technical dashboards that users could understand and work with day to day.
- I designed the frontend UI architecture, component system and SVG/Canvas data visualisations, connecting the technical functionality with the UX design.
- The result was a consistent interface that exposed a complex analytical workflow through clear real-time dashboards.

  Stack: Vue.js, JavaScript, HTML5, SCSS, SVG, Canvas

Senior Frontend Developer | COGNITO s.r.o. 2018 - 2019

- Enterprise web projects required a complete frontend layer integrated with an existing Symfony/Twig backend. I implemented the frontend and introduced Vue.js where appropriate, resulting in production UI solutions integrated with the backend.

Senior Frontend Developer | INSPIRE s.r.o. 2017 - 2018

- Bespoke web and CMS projects required a responsive frontend on top of an existing Nette/PHP backend. I designed and implemented the frontend architecture and UI, resulting in production web and CMS applications tailored to client requirements.

UI/UX Designer / Web Developer | VEIT Electronics s.r.o. 2016 - 2017

- Web and Windows desktop applications needed product requirements translated into understandable user interfaces. I created wireframes and UX flows and contributed to WPF implementation, connecting UX design with the delivered application.

UI & Graphic Designer | iGATE s.r.o. 2014 - 2016

- Products including Trackito needed a coherent interface and visual identity across mobile, web and marketing outputs. I designed the UI and product branding, resulting in a consistent product presentation across channels.

Project Manager / Web Developer | ZONER software, a.s. 2013 - 2014

- The InPage CMS required product management, team coordination, customer communication and bespoke extensions at the same time. I managed the product and team and developed custom web solutions, directly connecting customer requirements with product delivery.

TECHNOLOGIES

Frontend & UI
TypeScript, JavaScript, React.js, Next.js, Vue.js, HTML5, CSS3, SCSS, Tailwind CSS, Storybook

Backend & applications
Node.js, Express, Fastify, Vike, REST APIs, Symfony/Twig, Nette/Latte, ASP.NET/Razor

Architecture & tooling
Vite, Rollup, Webpack, pnpm, monorepo, package architecture, event-driven architecture

Data, real-time & rendering
PostgreSQL, Prisma ORM, Google Cloud SQL, Firebase, WebSocket, RxJS, SVG, Canvas

Testing & delivery
Cypress, Playwright, E2E/UI testing, TypeScript strict mode, runtime validation / Type Guards, GitHub Actions, GitLab CI/CD, Docker, Vercel, Google Cloud, Tailscale

Construction & technical preparation
CAD, BIM, KROS 4, RTS, ÚRS, Excel, bills of quantities, estimating, technical preparation

CONSTRUCTION & DESIGN EXPERIENCE

Estimator / construction technical preparation | **ZEMAKO, s.r.o.** **2026 - present**

- Construction tendering and delivery preparation requires combining itemised estimates, bills of quantities, current prices and technical assessment from multiple inputs.
- I prepare and check estimates in KROS 4 and ÚRS/RTS, assess earthworks, piping, drainage and other structures, coordinate supplier quotations, work with BIM platform inputs and automate recurring calculations in Excel.
- The result is a consolidated set of inputs for quotations and project delivery, including price updates, variations and change work.
  Stack: KROS 4, ÚRS, RTS, Excel, BIM, BIM platforms, bills of quantities, estimating and technical preparation

Building-services designer / HVAC & utilities - self-employed | **design practice** **2005 - 2012**

- Utility-network and building-services projects required capacities, routes and technologies to be coordinated across disciplines and documentation to progress through every stage to construction.
- I designed sewerage, water-supply and gas networks and later coordinated ventilation and heating, preparing planning, building-permit and construction documentation including bills of quantities, RTS estimates and authority coordination.
- The result was coordinated documentation ready for approval and construction; major references included Hotel JEREX in Ostrovačice and the Démos Trade production hall in Sokolnice, where I also contributed to technical supervision.

EDUCATION & AUTHORISATION

- Brno Secondary Technical School of Construction - water management structures.
- ČKAIT no. 1005625 - authorised building-services technician, sanitary technology specialisation; authorisation suspended.

WORK SAMPLES

nexis.monster
AI-agent workflow with validation, traceable sources and human-in-the-loop control for technical processes.

colorplayer.weela.cz
Browser-rendering experiment using WebAudio + Canvas to explore event-loop pressure, performance and memory behaviour during real-time visualisation.

portfolio.vsous.cz
Professional portfolio and additional projects.