SENIOR REAL-TIME 3D ENGINEER

VÁCLAV ŠTROBL

Three.js · Unity · WebGL · Shaders · XR / AR / VR

LOCATION & AVAILABILITY

Prague, Czech Republic
Czech — native · English — C2
EU remote / Prague hybrid
Available within a week
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PROFILE

I build real-time 3D applications and games — editors, configurators, virtual exhibitions and AR / VR — from the first prototype to production.

16 years of development, 10+ in interactive 3D, from server mods and my first Adobe Flash game to Unity and real-time 3D in Three.js.

After five years as a technical owner and a year of freelancing, I'm looking to bring that experience and judgment to a **long-term real-time 3D role**.

KEY ACHIEVEMENTS

01 OBALERO · Technical Architect & Lead Engineer

2020 – 2025 · obalero.com

I took the founder's idea to production: **a real-time Three.js editor**, shaders, the Illustrator plugin and **an automated Maya → Chaos Cloud render pipeline**.

RESULT **Weeks of team work cut to minutes, for 18 brands including Heineken and Pilsner Urquell.**

02 ASTELLAS VIRTUAL · 3D portal for doctors

Massimo Filippi · 2022

During COVID I replaced a physical exhibition with a Three.js pavilion: **five receptions, 45 videos, 25 documents and voice-over in two languages**.

RESULT **Ran as a worldwide exhibition with high traffic, smooth on mobile devices — finished in 1.5 months.**

03 ZOMBIE RAIDER OF RA · Own Unity game

Independent · 2017

I made the whole game on my own in **Unity / C#**, with a story, a live leaderboard and in-game purchases, and released it on the App Store and Google Play.

RESULT **Played by around 3,000 players.**

STACK

ENGINES

Unity · Three.js · Babylon.js · WebGL

RENDERING

Shaders · materials · baked lighting · InstancedMesh · GLB / Draco · Blender · Maya

XR

AR / VR · Vuforia · WebXR · alpha video

PERFORMANCE

FPS & memory profiling · polygon budgets · texture optimisation · low-end devices

CODE

C# · TypeScript · JavaScript · GLSL · React · Next.js

PIPELINE

Maya Scripting · Chaos Cloud · Adobe Scripting · WebSockets · CI/CD

AI WORKFLOW

Claude Code · Codex · MCP · Higgsfield · AI 3D modelling

PROFESSIONAL EXPERIENCE

FREELANCING — Since 2025

Real-time 3D · Product research & own products · Brand development

- **Strobl Configure** — my own open-source 3D configurator engine in Next.js and Three.js: **real-time reflections, artwork editing and print-file validation**, accurate models with a canopy Draco-compressed to 141 kB; ships as a Shopify plugin or iframe. github.com/strobl-vaclav/strobl-configure
- **Asylon** and **Volcánica Adventures** — brand websites in Next.js, launched in 14 and 7 days; Asylon with an integrated Matterport 3D tour.
- AI in daily work: Claude Code and Codex with MCP servers and my own skills, Higgsfield for visuals and AI-assisted 3D modelling.

Tech Three.js · Next.js · React · TypeScript · Draco · Shopify · Blender · Figma

> RESULT
> **Studio-quality 3D configuration that loads in seconds, open source on GitHub.**

OBALERO — 2020 – 2025

Technical Architect & Lead Engineer · 5-member team

- Designed the architecture and built the **real-time Three.js editor** in Next.js, where designers edit packaging artwork from Illustrator templates directly in 3D.
- Wrote the **glass and material shaders** and the GLB pipeline.
- Wrote the **WebSocket server** for real-time collaboration, version updates and render progress.
- **Automated rendering** with Maya scripts and a Chaos Cloud pipeline; built and published the **Adobe Illustrator plugin**.
- **Optimised data-heavy loading** with caching and image/texture processing for responsive 3D editing.
- Introduced **stand-ups, sprints, Git Flow and documentation**, with E2E tests in Cypress and Playwright and automated CI/CD pipelines.

Tech Three.js · WebGL · Shaders · Next.js · TypeScript · WebSockets · Maya Scripting · Chaos Cloud · Adobe Scripting · Illustrator SDK · Figma · Slack · Monday

> RESULT
> **An 8K production packshot in one click, across 10 packaging families and counting.**

MASSIMO FILIPPI & PARTNER AGENCIES — 2017 – 2022

Interactive 3D & Frontend Developer · 8-member team

- **The agency's main developer for frontend, mobile, VR / AR and 3D**, with one colleague on the backend.
- **Astellas Virtual** — **Three.js scene with layered alpha objects**, explicit render ordering, baked lighting and on-demand video loading, served as static HTML via CDN.
- **Sanofi** — transformed static pharmaceutical tables into interactive AR mini-games in Unity that **made treatment effects easier for sales teams to demonstrate**; two apps, each taken from architecture to store release in 1.5 months.

- **Kacířův Kancionál** — an interactive AR book in Unity / C#: **Vuforia tracking with alpha-channel video**, tuned for smooth video textures on iOS and Android.
- **Budvar** — responsive campaigns and mini-games from supplied designs, released weekly on the production website; web in Zend Framework, React and Bootstrap, native apps in Java and Swift.
- Delivered digital solutions and applications for small businesses, corporates and clients such as **Vinolok, Semtex, Prima, Publicis Groupe, Pardál, Unipetrol, Bosch, Verva, Puma, Siemens** and other international brands.

Tech Unity · C# · Vuforia · Three.js · WebGL · JavaScript · Java · Swift · React · Zend Framework · PHP · Firebase · Adobe Suite · Figma · Slack · Redmine

> RESULT
> **25+ clients in five years with the same team, including about two years of Budvar's complete online presence.**

RICOMTECH — Since 2010

Full Stack Developer · long-term project collaboration

- **Marilon — designed and launched the complete brand, website and custom JavaScript e-shop** for my first commercial client.
- Modernised WordPress and Joomla websites into React or HTML/CSS to improve security and maintainability, including PHP/MySQL migrations.

Tech React · WordPress · Joomla · HTML/CSS · PHP · MySQL

> RESULT
> **Maintained roughly 20 websites through security updates, optimisation and production support.**

GAME DEVELOPMENT — Since 2008

Own games, mods and prototypes

- **Acid Jet** (2026) — a browser game where music builds a playable 3D track: **Three.js with InstancedMesh** and minimal dynamic lighting, tuned for a high frame rate on mobile.
- **Zombie Raider of Ra** (2017) — a Unity / C# game with **a live leaderboard on Firebase**, login and Realtime Database; I did the rigging, SFX and explosions, special skills, unlocks, coins and outfit changes.
- **First game** (2012) — an animated Adobe Flash game scripted in ActionScript: players could beat up a character that kept refilling its lives. I came up with it and took it all the way to production; around 5,000 players.
- **Server modding** (from 2008) — my own servers for Neverwinter Nights, Need for Speed and GTA, with my own scripts and mods.

Tech Three.js · Web Audio API · Unity · C# · Firebase · Adobe Flash · ActionScript

> RESULT
> **A game in every generation of engines: Flash (2012), Unity (2017) and Three.js (2026).**

Full portfolio: vaclav-strobl.com/en/engineering/3d