Vojtěch Brůža

Creative Technologist & R&D Software Engineer

vojtech.bruza@gmail.com | Brno, Czech Republic
vojtech.bruza.eu

PROFILE

Creative Technologist and R&D Software Engineer with 7+ years of experience building immersive applications and platforms. Expert in Virtual Reality, Real-Time Networking, and Full-Stack Development. I leverage AI tools to accelerate development and advocate for CI/CD pipelines to ensure continuous delivery. Adept at managing full lifecycles, and delivering scalable solutions for enterprise and research domains.

SKILLS & TECHNOLOGIES

LANGUAGES

C# | TypeScript | JavaScript | Java | C++

FRAMEWORKS & TOOLS

Unity | XR Interaction Toolkit | React | Astro | Tailwind CSS | Git

DOMAINS

Virtual Reality (VR) | Real-time Networking | Human-Computer Interaction (HCI) | UI/UX Design

EDUCATION

Ph.D. in Computer Science (Developing Interactive Experiences for Education in Collaborative Immersive Virtual Environments)
Faculty of Informatics, Masaryk University
2026

Doctor of Natural Sciences (RNDr.) in Visual Informatics
Faculty of Informatics, Masaryk University
2022

Master's Degree (Mgr.) in Applied Informatics
Faculty of Informatics, Masaryk Universityy
2019

Bachelor's Degree (Bc.) in Applied Informatics (Bioinformatics)
Faculty of Informatics, Masaryk University
2017

EXPERIENCE

VR Software Engineer — 2025 – 2026

Invenio Center

- Engineered a deterministic, clinical VR research tool for Meta Quest 3 using Unity to measure cognitive stress.
- Architected scalable, timeline-driven VR interfaces and mechanics, driven flexibly by configuration files.
- Implemented microsecond-accurate data logging to sync interactive VR events with physiological sensors.

Lead Developer & Researcher — 2023 – 2026

University College Dublin (UCD)

- Led full-stack technical infrastructure for collaborative geogame platforms.
- Led the development of cross-platform solutions leveraging React and Minecraft while directing multiple interns.

Lead Developer (eDIVE Platform) — 2020 – 2023

Masaryk University

- Directed the development of the eDIVE platform, an operational educational tool in immersive virtual environments.
- Architected custom real-time networking using Mirror to sync low-latency VR interactions.
- Engineered modular VR mechanics using the XR Interaction Toolkit, significantly improving maintainability.

QA Automation Engineer — 2017 – 2019

SAP

- Developed and maintained automated testing suites for the enterprise Fiori web application platform.
- Integrated test automation into CI/CD pipelines to validate software updates and prevent regressions.
- Collaborated in an Agile team to proactively isolate and resolve edge-case bugs.

FEATURED PROJECTS

Invenio VR Stress Tool — Unity | C# | Meta Quest 3
A clinical VR research tool utilized for gathering standardized data on cognitive load and adolescent stress processing.

eDIVE Platform — Unity | C# | Mirror Networking | XR Toolkit
A collaborative immersive VR education platform that connects remote participants, enabling seamless learning and interaction in shared digital spaces.

Brno Bold 2024 Installation — TypeScript | p5.js | Generative Art | Motion Tracking
An interactive installation for the Brno Bold 2024 conference that combines real-time motion tracking and generative visuals to create a dynamic digital art experience.

VRdeo Platform — Unity | C# | Research
VR educational recording platform for content that can be experienced interactively in VR or exported as videos with post-hoc camera tracking.