

Senior Geospatial Software Engineer

20+ years in 3D technologies, specializing in web-based GIS, real-time 3D visualization, and Digital Twins. Experienced in building production applications using CesiumJS, React, TypeScript, and Unity, combining software architecture, technical leadership, and UX expertise.

Contact

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Core Skills

Geospatial & 3D Visualization

`Cesium` `OpenLayers` `ThreeJS` `GIS` `BIM` `Digital Twins` `Real-time 3D` `Spatial Data` `Interactive mapping` `Blender`

Frontend Engineering

`React` `TypeScript` `MaterialUI` `Component architecture` `Responsive design` `UX/UI` `Figma`

Backend, Cloud & DevOps

`Supabase` `PostgreSQL` `REST APIs` `Netlify` `CI/CD` `C#` `.NET` `Docker` `Git` `GitHub`

Software Quality & Engineering

`Vitest` `Testing Library` `Playwright` `Unit` `Integration` `E2E` `Software architecture` `AI-assisted development` `Technical documentation` `Cross-functional collaboration`

Work Experience

Product Engineer / Founder

2025 - present

Vistra.Space

- Architected and developed a production geospatial SaaS platform using React, TypeScript, CesiumJS, OpenLayers, and Supabase.
- Built interactive 2D/3D editing and spatial analysis tools for infrastructure planning, including noise and drone safety analysis.
- Integrated advanced visualization workflows using Three.js, Unity, and cloud-based AI rendering services.
- Established reusable frontend architecture, rendering optimizations, and automated testing to support reliable development.

Lead Software Developer

2016 - 2025

Blare.Tech / Sitowise

- Delivered real-time 3D visualization and Digital Twin solutions supporting AEC workflows.
- Developed visualization systems integrating GIS, BIM, point clouds, and other spatial datasets into interactive 3D environments.
- Improved rendering performance and usability when working with complex, data-intensive 3D scenes.
- Designed reusable UI components and application frameworks.
- Translated technical requirements into practical visualization tools through collaboration with clients, designers, and engineering teams.
- Contributed to architecture, technical decisions, and UX design across commercial projects.

Earlier Roles

2002 - 2015

(Lead Tech Artist / 3D Artist)

- Leveraged Unity for AEC/Urban visualization and VR prototyping.
- 3D modeling/texturing, and video editing.

Language

Polish - native
English - fluent

Certificates

Cesium Certified Developer
The Complete React 19 Developer Course (incl. Next.js 16)
Software Architecture & Design of Modern Large Scale Systems

See all of my certificates on LinkedIn

Education

Wyższa Szkoła Zarządzania w Gdańsku

2000 - 2002

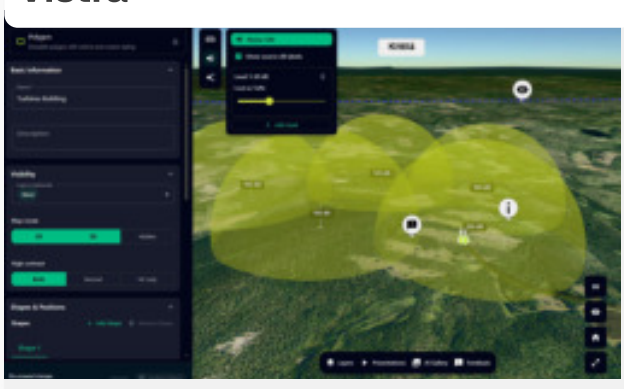
Bachelor's Degree - Internet in Management

Thesis: "Comparative analysis of 3D modeling software for game development"

Portfolio Highlight

Vistra

Production SaaS platform for GIS and Digital Twin visualization.



- Designed and developed a web application using React, TypeScript, CesiumJS/Resium, OpenLayers, Material UI, and Supabase.
- Built reusable frontend architecture for spatial visualization workflows.
- Implemented custom 2D/3D drawing and editing tools.
- Developed state management and rendering performance optimizations.
- Implemented spatial analysis modules for noise and drone safety
- Integrated additional visualization modules, including Three.js and Unity-based walkthroughs.
- Implemented cloud-based AI rendering workflows using multipass scene data and external generation APIs.
- Established automated testing with Vitest.

Tech: React • TypeScript • Material UI • Cesium • OpenLayers • Supabase Vistra App

Smartmap Gdynia

Interactive city mapping platform.



- Built Angular/TypeScript map components.
- Integrated multiple municipal datasets.
- Collaborated on UX design with Client.
- Created UI handoff guide for the Team.
- Implemented various UI components and Accessibility/High contrast UI features
- Built and integrated Unity-based WebGL walkthroughs

Tech: Angular • TypeScript • GIS • Unity Smartmapa

Hervanta Digital Twin

Digital Twin platform merging City's various 3D data with IoT.



- Implemented IoT data from Turku Public Transport
- Optimized performance for a city-scale display
- Developed HDMap data display through WFS
- Implemented Point Cloud data visualization
- Created WebGL version for public use

Tech: Unity, C#, WFS, HDMap, PointClouds, WebGL Video

My portfolio website