Michael Belousov

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Technical Skills

<u>Languages:</u> TypeScript/JavaScript, C++, Python, C, Zig, SQL, C# <u>Backend:</u> PostgreSQL, MongoDB, Linux, Node.js, nginx, Redis

<u>Cloud:</u> Terraform, Docker, Azure Containers, Azure Monitor, Azure Storage, Azure Functions

<u>Frontend:</u> React, Vite, Webpack, GraphQL, CSS, Express, Cypress, Playwright, Jest <u>Tools:</u> Git, GNU/Linux, GitHub Actions, Azure Pipelines, GDB, Valgrind, neovim

Experience

Graphl + Twin Sync Studio

May 2024—Current

personal project

- Shipped hybrid **Electron+React+zig** desktop application for fault-tolerant large geometric scene transformations
- Shipped in-house anti-piracy licensing service using **Bun TypeScript** and deployed with **Terraform** to **Azure Cloud**
- Implemented (in Zig) a visual scripting IDE and workflow engine compiler to WebAssembly
- Published SDK with host-defined functions and JavaScript/WebAssembly interop
- Shipped local-first web IDE and marketing page built with **Gatsby**, **React**, and **Github Actions**
- Built architectural visualization pipeline for iTwin/Synchro 4D data in Unreal Engine C++

BENTLEY SYSTEMS May 2019—May 2024

Software Engineer II

Exton, PA

- Led architecture and design for our next-gen **Electron**-based desktop app framework, mentored midsize team of **10+** junior to senior level engineers and managed development
- Led team of 5 engineers building APIs for transforming data in the iTwin Platform, in TypeScript, Node.js, and C++
- Implemented **5-10**× **speed** improvement of Transformation API through profiling and eliminating IO bottlenecks, after taking over service ownership
- Built several customer-facing full-stack applications leveraging micro-service architectures,
 Node.js, C++, React, ASP.NET, MongoDB, and Redis
- Deployed a **micro-frontend** architecture with version rollback to handle multiple teams delivering live component updates for >15 applications
- Designed 30+ CI/CD pipelines with **Github Actions**, **Azure Pipelines**, and **Python**
- Prevented costly company breaches by discovering and patching **15+** severe vulnerabilities in critical systems by introducing fuzzing, sanitizers, and **Clang** static analysis

Education

UNIVERSITY OF CONNECTICUT, Storrs, CT Graduated with *Bachelor of Science* in *Computer Science and Engineering* in 2019

Notable open source contributions

- <u>zlint</u> linter for the zig programming language
- <u>lint-staged</u> msys2/cygwin platform support
- <u>typescript-eslint</u> bug in return-await lint rule
- Godot game engine bug in initial C# object marshalling
- onivim2 command palette autocomplete bug in vim-like editor