Michael Belousov

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Experience

BENTLEY SYSTEMS, *Software Engineer II* **(May 2018—Resigned May 2024)**

- Led architecture and design for our next-generation Electron-based desktop app framework, mentoring all team members and helped manage day-to-day development
- Led development and mentored contributors of transformation API for the iTwin platform, a hybrid TypeScript/Node.js/C++ service
- Improved performance of the iTwin Platform public backend system, a cluster of Node.js/C++ services which persist data in a custom object-storage-based virtual file system for SQLite
- Produced webinar of platform integration with platform's highest impressions (>5K) on LinkedIn. Wrote marketing webpages, tutorials, and blog posts
- Contributed to several customer facing full-stack applications with Node.js, C++, React, .NET, MongoDb, and Cloud SQLite
- Maintained dozens of CI/CD pipelines across Github Actions and Azure Pipelines
- Introduced fuzzing (catching dozens of buffer overflows), sanitizers, clang static analysis, and other tooling to native buildology

ITS, *Security Team Developer* **(December 2016—May 2019)**

- Wrote an SVG network diagramming toolset that uses SNMP, CDP scanning, and a CISCO router CLI parser
- Migrated a PHP-Python2 XMLRPC+jQuery web stack to Python3+Vue.js

UCONN SPEECH AND HEARING RESEARCH, *Technical Contractor* **(March 2017—July 2018)**

- Built (solo) a car driving simulation in Unreal Engine 4 for tracking navigation patterns, for neurological research, with Python/TkInter tooling for replaying patient sessions

Technical Writing

- introducing @bentley/imodel-react-hooks
- iTwin Platform Unreal integration tutorial (archive)
- Evolve your iTwin with Unreal
- Bringing your iTwin into Unreal (webinar video)
- How I learned to love Zig's diagnostic pattern

Education

UNIVERSITY OF CONNECTICUT, Storrs, CT

Bachelor of Science, Computer Science and Engineering. Completed May 2019

Technical Skills

Zig, C++/C, TypeScript, Python, GNU/Linux, Git, React, Node.js, Rust, OpenGL/GLSL, GitHub Actions, Azure Pipelines, Azure Cloud, .NET, C#, HTML5/CSS, SQLite, Postgres, MongoDb, Web Assembly, PHP, Godot, Unreal Engine, Docker, Rust, Electron, Lisp+Scheme, Java, Valgrind, ASan, libfuzzer, libAFL, rr, gdb, PowerPoint, Word, matplotlib

Notable open source contributions

- `lint-staged` msys2/cygwin platform support
- `typescript-eslint` bug in return-await lint rule
- `Godot game engine` bug in initial C# object marshalling
- `onivim2` command palette autocomplete bug in vim-like editor

Awards

- 2021 Founder's Award in Product Advancement at Bentley Systems
- 2022 Founder's Award in Product Advancement at Bentley Systems