

Caleb Katzenstein

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Skills

- **Programming languages:** JavaScript/TypeScript, C++, C#, Rust, Python
- **Web frameworks:** React, Next.js, Gatsby.js

Work Experience

[Zap Surgical Systems](#), Software Engineer (July 2024 - Present)

- **Tech Stack:** TypeScript, Node.js, React, Electron.js, CMake, C++
- Automated and documented developer onboarding process, increasing developer productivity by 80%
- Maintained C++ codebase for dose delivery algorithms
- Ported legacy C++/CUDA applications from Windows to Linux
- Made containers for internal and third-party services with Docker
- Created Debian packages for services and Electron.js applications
- Owned the plan report generation feature of Axon TPS
- Implemented features such as in-app screenshots and section organization

[Mercedes-Benz](#), DevOps Engineer, Contract (September 2023 – March 2024)

- **Tech Stack:** Python, Bazel, JavaScript, Apache Echarts
- Migrated CI/CD pipelines to Bazel
- Improved developer experience by writing tests and creating formatting and linting scripts
- Visualized CI/CD analytics using JavaScript, Python, and Apache ECharts

[Aeva](#), Software engineer (October 2022 – August 2023)

- **Tech Stack:** C++, OpenGL, Bazel, GLSL, Qt
- Worked on internal GUI tools that visualize data made of 1000's of 4D points in real-time
- Enabled our internal app to update itself over HTTPS, saving staff and clients up to 30 minutes of configuration time per update
- Created dashboards that enabled real-time communication with state-of-the-art 4D LiDAR sensors
- Added new visualization options for point-cloud data using OpenGL
- Created Qt widgets for both internal teams and customers

[Goldman Sachs](#), Web Developer (May 2021 - September 2022)

- **Tech Stack:** TypeScript, Next.js, React, Java
- Maintained API gateway service, written in Java
- Integrated CEO David Solomon's Instagram feed with the intranet's home page
- Used modern web frameworks (Next.js) to modernize popular applications on our intranet
- Created new ways for employees to discover relevant internal content, which increased employee engagement with intranet
- Implemented several new subsites on the intranet, such as:
 - Pets of GS (adopted during the COVID-19 pandemic)
 - Hobbies of GS

Education

- Rochester Institute of Technology (2016 – 2020)
- Bachelor's Degree in Game Design and Development

- 3.87/4.00 GPA, *summa cum laude*

Open Source Contributions:

- [Plasma Bigscreen](#), an open-source TV interface for Linux
 - [Merge Request 176](#): Maximize apps if already running instead of starting them again
 - Used Qt, QML, C++
- [Boa](#), an experimental JavaScript lexer, parser and interpreter.
 - [PR #4623](#): Add tests to JsSymbol implementation
 - Used Rust
- [Mach](#), Game engine & graphics toolkit written in Zig
 - Added tests for Mach's linear algebra library

Personal Projects

- [Shared World Generator](#): Create 3D worlds out of shapes and save them with a unique ID.
 - **Tech Stack**: three.js, JavaScript, TypeScript, Redis
- [Portable Engine](#): An attempted game engine focusing on modern tooling and cross platform support.
 - **Tech Stack**: C++, OpenGL, DirectX 11, Emscripten, OpenXR
- [Redmoon](#): An implementation of the Lua scripting language.
 - **Tech Stack**: Rust
- [Bitray](#): An experimental ray-tracer for my learning and amusement.
 - **Tech Stack**: Rust