THEO ERICKSON

C++ SOFTWARE ENGINEER / DESKTOP, 3D & AI TOOLS

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Summary

Software engineer with 5+ years shipping C++ production systems and developer tooling in games, now building desktop, Android and AI-assisted tools. OrcaSlicer contributor with an upstream PR, and author of C#/WPF, Electron and Python apps with MCP servers for AI assistants. **Github.com/theo-Erickson**

Industry Experience

ORCASLICER / CRASHSLICER FORK — C++ SOFTWARE ENGINEER — NOV 2025 – PRESENT

Open Source, Freelance | C++17, wxWidgets, Dear ImGui, OpenGL, CMake

- Built desktop GUI features (ImGui, wxWidgets, OpenGL) for a large open-source 3D slicer: toolpath preview, transient unit-system controls, timeline UI.
- Built nonplanar slicing driven by mesh surface normals, and a windowed G-code preview for inspecting path segments.
- Documentation/Feature List + Github Feature Branches
- Authored upstream PR #13168: a transient unit-system swap in the Move and Scale gizmos using XOR-based flipping and per-frame ImGui state, writing no preference values during a temp hold.
- Iterated that PR through maintainer review: refactored a standalone module into the existing unit display layer, and rebound a hotkey after a contributor raised a keyboard-layout conflict.

CRASHSPACE (A Los Angeles Hackerspace) — FACILITIES TECHNICIAN: 3D PRINTING & LASER CUTTING — OCT 2024 - PRESENT

501(c)(3) Makerspace | 3D Printer Maintenance, Teaching, Facilities Upkeep

- Maintain an FDM print farm (Prusa, Bambu) and two CO2 lasers; author and teach the facility's 3D printing and laser cutting classes.
- Build the space's web tools (below) and drive the slicer fork's roadmap from recurring member failure modes.

SOVEREIGN AXE STUDIOS / SUPER EVIL MEGACORP / DEVIATION GAMES — SOFTWARE ENGINEER (GAMES): C++ SYSTEMS & TOOLING — APRIL 2020 - PRESENT

- Architected C++ class structures and core runtime systems for character, combat, and progression, designed for extensibility across growing content teams. (Sovereign Axe, current)
- Wrote C++ and custom-scripting tooling that let designers implement complex systems independently, measurably improving team iteration speed. (Super Evil Megacorp)
- Designed and implemented a data-driven weapon and attachment system in C++ with scripting exposure, supporting dynamic property combination across component types. (Deviation Games)
- Extended a proprietary engine with new developer-facing capabilities, landing changes with the core engine team that met internal code standards.
- Worked in multithreaded runtime environments: async asset loading and frame-loop-bound systems under real-time performance constraints.
- Shipped on TMNT: Splintered Fate; promoted from Associate Gameplay Engineer up to Senior Technical Designer.

HATPICK + GITPICKY

C#/WPF and TypeScript/Electron git tools with MCP servers, so AI assistants propose changes users approve. Integration tests and CI installers for 3 operating systems.

KEYFX / FXBOARD

Java, Android. Effects library with a documented host API, used in a FUTO Keyboard fork and an LSPosed module. Signed CI releases.

CRASH ADDON MANAGER

Firebase, JS. Live open status with a physical button, a Meshtastic map via MQTT, and a room dashboard for a 501(c)(3).

READMOTION

Python, Playwright, ffmpeg. Built for Sovereign Axe: records repeatable footage from 8 sources and builds README media, with a local web app and tests.

Relevant Skills & Education

- **Languages**: C++ (11/17), C#, Python, JavaScript, Lua
- **Build & IDE**: CMake, MSVC, Visual Studio, JetBrains Rider
- **Web & Tools** : Firebase, HTML/CSS/JS, Git, GitHub Actions, Perforce, Semantic Kernel (in progress)
- **Graphics & UI**: OpenGL, Dear ImGui, wxWidgets
- **Manufacturing**: OrcaSlicer/Slic3r-lineage codebases, G-code, 3MF, toolpath preview, FDM (Prusa, Bambu), CO2 laser cutting, computational geometry, mesh processing, toolpath generation

UCSC: BASKIN SCHOOL OF ENGINEERING

BS Computer Science: Game Design