Cody Bloemhard

Software Engineer

Utrecht, The Netherlands

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Summary

I have worked on all kinds of software including 2D and 3D games, game engines, rendering engines, GPGPU, command line applications, open source libraries, android apps, data processing tools, experimental prototypes, interactive electronic devices, AI's, procedural generated content and algorithmic art. I support the philosophy, use and development of free and open source software. My favourite programming language is Rust.

Education

BSc in Computer Science   Utrecht

Utrecht University

Propedeuse Bachelor of Creative Media and Game Technologies, Game Development Hilversum

HKU (University of the Arts Utrecht)

- During this time I learned to work with designers, artists, end users and other less technical people.

Experience

Software Engineer   Utrecht

Utrecht Companion to the Earth

- Utrecht Companion to the earth is an app that aids Geo-science students. Our client was the Geo-science department of Utrecht University. My responsibility was optimizing big data for mobile use and building an Android app. Technologies used by me were Rust and Kotlin with Android Studio. We used Agile methodologies and test automation with CI.

Exposure

Languages	**Rust**, C#, Python, C/C++, Java, Kotlin, Haskell, GLSL, HTML/CSS, Typst, Latex
Frameworks/Libs	OpenGL, OpenCL, Unity3D, Docker, Bevy, Monogame, Arduino
Miscellaneous	Git, (neo)Vim, Agile, Arch/Artix/Void Linux
Spoken Languages	native: Nederlands, professional: English

Projects

paclog   → codybloemhard/paclog

- [Rust] A CLI log inspection tool to query the pacman log file.

editimg   → codybloemhard/editimg

- [Rust] A scriptable image editor optimised for the tiling window manager workflow.

stonks   → codybloemhard/stonks

- [Rust] A CLI plain text accounting tool to track personal finance in a transactional database.

linux-rice   → codybloemhard/linux-rice

- [Shell/C/...] Custom desktop environment by configuring and forking selected open source components.

termdaw   → codybloemhard/termdaw

- [Rust] A CLI/TUI digital audio workstation (DAW) meant for algorithmic and AI music composition.

TheøryFrøg   https://codyb.xyz/theory-frog.html

- [Rust/WASM] static webapp to query music theory information.

music-theory   → codybloemhard/music-theory

- [Rust] Library to process music theory objects and queries, with 100% test coverage.

GPGPU Pathtracer   → codybloemhard/clrays

- [Rust/C#/OpenCL] GPU accelerated pathtracer with BVH and microfacets, algorithms implemented from academic papers.

Raytracer   → codybloemhard/UU_Raytracer

- [C#] With models, stratified sampled area lights, textures, stochastic glossy reflections, HDR skyboxes, multithreading.