

Clement Colin

C++ Software Engineer · Desktop Applications · Networking · Systems Programming

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Spouse visa, no sponsorship required.



PROFILE

42 Tokyo graduate specialising in C, C++ and systems programming. I build performant desktop applications, networking software, and graphics engines, with a focus on clean architecture and maintainable, well-documented code.

I am a strong self-directed learner who picks up new technologies quickly, and I take a project from first idea to a finished result. At 42, every project is assessed by face-to-face peer review, which gave me steady practice explaining my own code and reading code written by others, alongside several team projects.

Before software I worked as a cook and in delivery (2011-2020), then in SEO and freelance web design, before committing fully to engineering.

EDUCATION

42 Tokyo 2024-2026

Completed the common core of a demanding, project-based program built on peer learning with no lectures: C and C++, algorithms, Unix systems, networking, and Docker.

CAP Cuisine 2011-2013

Vocational cooking diploma.

SELECTED PROJECTS

Remote Desktop

Screen-streaming client and server that transmits only the changed screen tiles through a custom binary protocol, cutting bandwidth against sending full frames. Manages its own Cloudflare tunnel end to end (login, configuration, credential parsing) and interoperates between macOS and Linux in both directions.

Tools: C++ · Qt · Cloudflare Tunnel · CMake · client/server · custom protocol

SKILLS

Languages: C, C++20 (primary), Bash, plus Python and JavaScript (working knowledge)

Frameworks and libraries: Qt 6, SDL2, POSIX threads, nlohmann/json

Tools: Git, Docker, CMake, Make, Linux, Valgrind

Focus: systems programming, multithreading, IPC, protocol design, desktop applications, graphics and rendering, algorithms, networking (TCP/IP), OOP

LANGUAGES

French (native)

English (fluent, professional working proficiency)

Japanese (elementary, daily-life level, actively studying)

ReWatch

Cross-platform desktop tracker for films and shows. Ranks a library with a binary-search tournament (about 10 comparisons to place a title among 1,000), integrates the OMDb API with request budgeting against a free-tier quota, and packages as a native macOS app and a Linux AppImage.

Tools: C++20 • Qt 6 • CMake • OMDb API • JSON

SDL Raycaster

First-person raycasting engine in C on SDL2, with no game engine and no raycasting library. A multithreaded renderer splits each frame across CPU cores with a z-buffer for correct occlusion, alongside a full movement model and three hand-built levels.

Tools: C • SDL2 • POSIX threads • multithreading • Makefile

Makeibo

Budgeting app loosely inspired by the Japanese kakeibo method. Parses real bank statements in three formats, including full-width Japanese digit normalisation, with a bilingual French and Japanese UI and envelope budgeting with undo and redo.

Tools: C++20 • Qt 6 • CMake • nlohmann/json • i18n

push_swap

Cost-based stack sorting under a fixed operation set, in the top grading bracket (about 560 operations for 100 numbers and 5,000 for 500), verified over 200 randomised trials.

Tools: C • Makefile • algorithms

More projects and write-ups at clementcolin.com. Full source at github.com/colinclc.

EXPERIENCE

Freelance Web Designer Weble • 2022-2024

- Built and delivered client websites on WordPress with the Elementor page builder.
- Handled light HTML and CSS customization for pieces that needed a more tailored look.

Tools: WordPress • Elementor • HTML • CSS

SEO Web Writer, then SEO Specialist Nerubi • 2020-2023

- Owned end-to-end SEO for up to 9 client sites at a time, self-taught from scratch.
- Built keyword databases and content strategy, and briefed writers on structure, target keywords, and guidelines.
- Audited sites for technical issues (metadata, header hierarchy), fixing them or handing them to the web team.
- Monitored Search Console and grew organic traffic steadily, ranking clients on the searches their customers make.

Tools: Semrush • Screaming Frog • Google Search Console