Senior Software Engineer - Technical Lead

About Project Crayon

Project Crayon works with studios and publishers all over the world to reinvigorate retro and classic games in new and exciting ways. We innovate history and port it onto next-gen home game consoles. We work with indie and homebrew game developers to help them realize their vision and get it in front of new audiences.

Apply now at **careers@projectcrayon.dev**

What You will Do

Project Crayon is looking for a highly qualified Lead Software Engineer to help lead a small team into the dark abscess of historical game engines, and then lead that same small team back into the shining light of success.

Role In Detail

- reverse engineer of classic game engines using state-of-the-art decompilers, disassemblers, and custom-built tools
- Writing platform-optimized multithreaded code and solving latencies in asynchronous dependency graphs
- Leverage extensive knowledge of C++ and cross-platform compilers to ensure seamless compatibility across diverse gaming platforms
- Conduct in-depth profiling and optimization targeting proprietary home game console systems, pushing hardware to its limits
- Support external customers by answering their technical questions
- Perform comprehensive risk assessments and oversee task breakdowns in planning
- Develop proof-of-concepts for innovative new hardware simulation techniques and game porting solutions

Technical Expertise We're Looking For

- Proven experience with low-level programming, particularly in emulator development or operating system development
- Strong background in computer architecture, with a focus on accurately simulating diverse CPU and GPU architectures
- Expertise in optimizing code for multiple platforms, including x86, ARM, and custom console processors

- Proficiency in debugging complex, multi-threaded applications across various hardware configurations
- Familiarity with SIMD instruction sets and SOA vs. AOS program structure

More Stuff That's Nice To Have

- Hands-on experience with GPU programming (shader languages, texture management)
- mobile platform software development (ARM, Android, iOS)
- Contributions to open-source emulator projects
- Knowledge of historically relevant assembly languages (6502, Z80, 68000)
- Familiarity with audio emulation techniques and DSP programming
- Familiarity with both Windows and Linux software development

Why Join Project Crayon?

- Work at the cutting edge of game preservation and emulation technology
- Collaborate with a passionate team dedicated to breathing new life into gaming classics
- Opportunity to contribute to the gaming industry's history while shaping its future
- Flexible work environment that values innovation and creative problem-solving

If you're passionate about retro gaming, have a knack for solving complex technical challenges, and want to be at the forefront of game preservation technology, we want to hear from you!

Submit resume and cover letters to:
careers@projectcrayon.dev