

Jesse J. Hughes

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github.com/scallyw4g

12 Years Professional Experience, 10 Years Remote



Interests

Windows

C++

Web Development

Developer Tooling

Linux

OpenGL & WebGL

Ruby / Rails

Performance

C

SIMD

Javascript / Typescript

Graphics & Game Engines

Metaprogramming

Multithreading

Golang

Shell

Git

OSS Contributions

Poof

Metaprogramming Compiler

<https://scallyw4g.github.io/poof/>

2020 - Present

Fast and flexible metaprogramming system

C C++

Brings features of modern programming languages to C

Bonsai

3D Graphics & Game Engine

<https://github.com/scallyw4g/bonsai>

2015 - Present

Renderer, Profiler, Entity System, Physics

OpenGL C C++

From scratch -- no third party libraries

Oil

POSIX Shell & Python Runtime

<https://github.com/oilshell/oil>

2022

Upgrade path from bash to a better system scripting language and runtime

C++ Python Shell

Contributed a (partial) Python runtime and a mark/sweep garbage collector

Lemurian Labs

Lead development of greenfield compiler, runtime and simulation software projects

Hire, manage, train engineers ranging in skill from Intern to Principal

Consistently delivered high quality results on-time, often with scarce resources

Compiler & Cycle-Simulator Lead

2022 - 2023

C C++ Multithreading golang

Remote

Optic Power

Own discovery, architecture and kickoff phases of client projects

Manage up to five in-flight projects, including the technical staff, sales team and client

Reverse engineer closed-source binaries, including Valves Source2 engine -- "Crazy game hacks" was in the job description

Solutions Architect & Reverse Engineer

2020 - 2022

TS JS Elixir C C++ ASM

Remote

KeyDB

Performance-oriented contract work on a multithreaded Redis fork

Rewrote IO subsystems to use io_uring

Senior Engineer

2021

C C++ Multithreading

Remote

Evolution Ventures

Build, extend, maintain WebGL-based architecture visualization tools

High-level technical direction for 3D products

Graphics Engineer

2019 - 2021

WebGL TS React

Remote

Web Development & Consulting

CrossFit Games -- games.crossfit.com

McAfee MPOWER -- mcafeempower.com

Many other clients including Stanford and Gap

Fullstack Developer

2013 - 2019

JS PHP

Remote & Onsite

Fresche Solutions

Rebuilt product integration portal - C++ backend, Angular2
frontend

Refactored 300Kloc C++ Windows IDE to support Unicode

Increased test coverage by 4x

Win32 Engineer

2014 - 2016

C++ JS PHP

Onsite