STACY GAUDREAU

SOFTWARE & FULL STACK SYSTEMS DEVELOPER

PROFESSIONAL STATEMENT

Self-starter autonomously driven to discover new abilities and technology. Founder and lead developer of an electronics company, autodidactic programmer and circuit designer with an eye for UX and product design. Over a decade combined experience developing systems in C++ as well as JavaScript web tech, frameworks and other scripting technologies (eg: Python, Bash). Extensive experience transforming product concepts into reality.

EDUCATION

BSc Computer Science

University of London

2019 – 2024 (October)

Electrical & Computer Engineering

University of Manitoba

2011 - 2013

SKILLS OVERVIEW

JavaScript, Python, C++, SQL, Bash & others

Business & financial logic

Design & UX fundamentals

Full stack web & database tech (eg: React/Next.js, RDBs, NoSQL, Django and React Native)

Proficiency with Figma, Adobe XD

Computer networking & Linux systems

REST and other API standards

Monolithic as well as serverless and/or IaaS deployments and architectures

EXPERIENCE

Senior C++ Developer

Polyverse Music Inc. I 2022 - 2024

Cross-platform desktop GUI software development

- Developing solutions to improve the maintainability, usability and reuse of code in our shared library, keeping up with best practices in the ever-evolving landscape of new language and framework features
- Multitasking in a tight-knit team to produce and maintain multiple products, using a component-centric MVC-paradigm GUI framework
- Regular use of geometry and linear algebra to solve low-level vector graphics rendering problems
- Close collaboration with our designer using Figma for design, prototyping and development of market-leading, uncompromising UI & UX
- Simulating ideas and systems using Python and other visualisation tools

Founder, Lead Developer

Hexinverter Électronique I 2011 – 2022

Invention, hardware and software design, development and manufacture of more than a dozen audio electronic products, including operational tasks

- Invented creative workflows and automation to solve challenging engineering problems
- Leveraged software and scripting tools such as Python and its libraries to simulate systems and develop solutions for designs
- Managed sales, shipping and distribution to a worldwide network of boutique audio dealers. Everywhere from North America to South Africa and Indonesia
- Troubleshooted our way out of problems using a variety of test equipment (oscilloscopes, logic analysers, signal generators, etc.)
- Worked closely with and managed a small team to achieve manufacturing at scale, graphics and media design
- Writing thorough technical documentation in the form of user manuals, product packaging, assembly instructions and procedures

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CAREER MOTIVATION

Seeking to leverage a diverse background in software, hardware development and business logic toward a senior development role which challenges and inspires me.

At present, finishing a BSc CS (part time, distance learning) in order to supplement a lifetime of self-learned experiences with more rigorous software theory.

LANGUAGE PROFICIENCY

English - written and spoken.

RECREATION

Gardening & hydroponics

Motorcycles

Nature trips

Music production

Physical exercise

RECENT PROJECTS & LEARNING ACHIEVEMENTS

Ray Painter

A raytracing 3D rendering library & API written from scratch in C++.

- Test-driven development used throughout the library.
- Vector/matrix mathematics library and raytracing engine written from scratch.
- Multi-threaded, CPU/software rendering; may add GPU compute in the future
- Ray Painter is the work-in-progress desktop GUI part of the application, designed to provide a convenient and intuitive editor for creating 3D artwork and prints with.

TradeKeeper

An Android and iOS financial trading app built with React Native.

- Using Expo/EAS Build as a development foundation, as well as vanilla parts of React Native (eg: React Native Router instead of Expo Router)
- A project to showcase understanding of React, React Native and mobile development
- Backend provided via serverless Firebase functions, authorisation and JSON-like database
- Backend uses a 3rd-party stock market REST API for market data
- UI/UX developed and prototyped in Figma

Rate My Derp!

A production-grade full stack web application and deployment built using Python, Django, JavaScript and other web technologies. A learning exercise to further skills in software as well as deployment considerations in a Linux environment. Some highlights include

- Following industry best practices including test-driven development
- Integration of InfluxDB to provide a timeseries database and metrics dashboard for monitoring the deployment and application KPIs
- Using Celery to deliver periodic application measurements and statistics to the timeseries database

Networking, Server & Compute Lab

Design and administration of a server cluster for learning about networking, virtualisation, distributed and network storage technologies, with an emphasis on open-source technology. Provides a local software development and computing hardware environment including

- Multi-node Debian-based KVM hypervisor cluster
- CentOS/RHEL and Ubuntu server VMs
- Deployment of various open-source enterprise software
- ZFS storage for redundant datastore & backup targets