

Scott Smith

Software Engineer

CONTACT

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PROFILE

Software Engineer dedicated to crafting simple, manageable solutions for large-scale, sophisticated systems. Small Business Owner and Administrator of several production applications. Designer and Lead Maintainer of the **dr9n** framework. Shell and GNU/Linux enthusiast. Lead Guitarist and Vocalist. Minimalist.

SKILLS

HTML

CSS

JavaScript

SQL

Shell

GNU/Linux

WORK

Founder / Software Engineer

ssmith software

September 2023 – January 2026

- **Clients Include**

- **Wings Fitness**

- Maintainer of the **Wings: School of Movement** web application. Built entirely with the **dr9n** framework.
 - Configured a custom private Real-Time Messaging Protocol (RTMP) NGINX server to transcode live video into HTTP Live Streaming (HLS) segments for smooth playback and adaptive quality streaming to be viewed by users. Users receive real-time data updates directly to their web client through Server-Sent Events (SSE) and email update notifications. The web client relies on HTML5 Video and MediaSource Extensions to play live video using a custom HLS.js integration.
 - Designed and developed a custom Administrator Dashboard that allows system administrators to upload pre-recorded video for server-side transcoding using FFmpeg, author new site content using a custom WYSIWYG text editor integration, organize site and video content using a fast, responsive drag and drop interface based on recursive data structures, as well as gain insights on site-specific data by viewing user account information, user sign ins, and system logs of content interactions, video plays, and live stream views.
 - Worked closely with stakeholders to fine-tune various sign in procedures that facilitate account creation for technologically challenged users. Created a custom sponsorship "Account Sharing" procedure to securely link family and friend accounts to a single sponsor account responsible for delivering payments for all linked users at discounted prices. Created a custom referral-based procedure to grant new users a free trial of the program when a promotional code or health care provider reference is added during sign in. Developed a standard sign in procedure that offers a familiar way for users to enter a payment method and gain access to program content at full price. All sign in procedures integrate deeply with Stripe using a custom accounting service layer written in PostgreSQL.
 - Engineered and implemented complex data models in PostgreSQL that include a custom authentication service layer for site security and user management, a custom accounting service layer integrated deeply with Stripe for caching mission critical data and limiting the rate of external API usage for common user and site-specific operations, and a recursively indexed custom application layer used to administratively control the creation of dynamic site content and its hierarchical organization and representation.

- Administered cost-efficient system infrastructure and deployment strategies using various Amazon Web Services (AWS) tools including CloudFront Content Delivery Network (CDN), Elastic Compute Cloud (EC2) using custom Amazon Machine Images (AMI), Relational Database Service (RDS), and Simple Storage Service (S3).
 - Provided consultation services to owners and stakeholders of Wings Fitness to invent the **Wings: School of Movement** web application, a subscription-based adult and senior online fitness program dedicated to delivering educational health and exercise content through Video On Demand (VOD), Real-Time Live Streaming (RTMP), and text-based (HTML) mediums.
- Began development of the **dr9n** framework.
 - Founded ssmith software as a Sole Proprietorship.

Software Developer

VCS HR

April 2022 – August 2023

- Architect of Maverick, the successor to POSS — the company's flagship software product.
- Spearheaded the design and implementation of Maverick to resolve long-standing performance, scalability, and service degradation issues of an antiquated Visual Basic monolithic web application responsible for serving over 800 police departments nationwide.
- Mentored the development staff through a series of core software reformations including the following: the migration of outdated and underperforming business logic to a SQL Server query driven data layer; the extraction and refactor of convoluted application code into lightweight, testable REST middleware APIs using .NET, C#, and Node.js; as well as the beautification and modernization of several web application clients using React and MUI.
- Delivered **live speeches** and performances (**The Star-Spangled Banner, Live Music & Entertainment**) for the marketing, introduction, and showcasing of Maverick to an audience of new and existing clientele at multiple business expositions including the 2023 VCS Evolution Exchange and the 2023 Police Security Expo.
- Reimagined, redesigned, developed, and maintained the **Jobs4Blue Customer Portal** web application using SQL Server, Node.js, React, MUI, and Google Maps APIs.

OPEN SOURCE

dr9n

api

A set of Node.js modules used to bootstrap a lightweight REST API.

archlinux

A collection of Shell scripts used to bootstrap a Linux Desktop Environment for local development and an alternative, lightweight virtual machine image for cloud environments.

db

A PostgreSQL extension used to generate JSON Schema and the additional metadata files needed to create simple JavaScript functions from native PostgreSQL functions.

env

A Node.js adapter module for generating local .env files with shared application data.

schema

A Node.js adapter module for the dr9n PostgreSQL extension.

web

A modern, dependency-free vanilla JS web client library built entirely upon HTML Web Components Web APIs. Supports complex Single Page Application (SPA) routing, Asynchronous JavaScript and XML (AJAX) Form Submissions, and various extensible form controls and routing utilities.

EDUCATION

Southern New Hampshire University

Computer Science - Bachelor of Science
2020 – 2022

Brookdale Community College

Computer Science - Associate of Science
2017 – 2020
