

Christopher Wheeler

Systems Architect & AI Engineer

40 Years on Computers · 5 Years Deep in AI · Remote / Hybrid

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[beatsyncpro.ai](#) · [Portfolio](#) · [LinkedIn](#)

Pacific Northwest, USA

RendereelStudio LLC · Founder

Systems architect with 40 years of computer experience and 5 years building production AI systems — from the earliest days of Stable Diffusion 1.5 through training custom neural networks from scratch. In 8 months as a solo architect, shipped **6 commercial products spanning 6 different domains**: AI video production (15 agents, patent pending), neural video upscaling (custom 2.08M param model trained from scratch), post-quantum code protection (17 layers, FIPS 203/204), desktop AI intelligence (25 agents), a **cloud-native 172-agent multi-tenant business OS on AWS** with a self-evolving HIVE agent system (971+ API routes, 222 DB tables, multi-state tax engine covering 42 states, workflow automation, recurring billing, real-time notification rules) and full accounting, payroll, and content generation engines, and a full-stack web platform (Flask + PostgreSQL credit server, 22-product e-commerce storefront). Each product required learning a new problem space and shipping real software into it — **the constant isn't the stack, it's the ability to architect, build, and ship anything**. 284+ AI agents in production. All products commercially live at [beatsyncpro.ai](#). Full-stack: Python, TypeScript, Rust, React, GLSL, C, Flask, FastAPI, PyTorch, PostgreSQL, AWS CDK, CUDA.

6

PRODUCTS SHIPPED

284+

AI AGENTS BUILT

2.08MPARAM MODEL
TRAINED**170+**

PYTHON MODULES

17

SECURITY LAYERS

22LIVE PRODUCTS ON
PAYHIP**~40yr**COMPUTER
EXPERIENCE

PRODUCTS SHIPPED — SOLE ARCHITECT & DEVELOPER

BeatSync PRO v3.1.5 — AI Music Video Production System

Patent Pending #63/920,132

RendereelStudio LLC · Desktop Application (Windows) · 170+ Python modules · 77 bugs fixed · \$60/mo or \$299 lifetime · 2024 – Present

- Architected a **15-agent autonomous AI production system** that analyzes music (beat detection ± 5 ms, section classification, energy mapping), selects clips via AI vision analysis, and renders finished music videos with zero human editing
- Agents operate in **5 production waves** with cross-session memory, reward-based learning (Apex Omega scoring), quality gates, and creative debate — a virtual production company in software
- 4 custom GLSL shaders** (Chromatic Aberration, Pixel Sort, Reality Warp, Quantum Field) running beat-reactive on ModernGL standalone GPU contexts with per-frame audio uniforms
- Mission Control terminal, branded intro system, 100% clip utilization mode, cancel-safe render pipeline, 3,000+ bundled AI clip library, NVENC GPU encoding
- Stack**: Python, PySide6/Qt6, ModernGL, GLSL, FFmpeg, NVENC, FastAPI, Railway, Payhip/Stripe

Clareon v8.2.2 — AI Video Upscaler with TITAN v8.0 Agent Intelligence

30-Agent ML Pipeline · Real-ESRGAN · Topaz Competitor

RendereelStudio LLC · Desktop Application (Tauri + React + FastAPI) · 36+ bugs fixed · \$79 license · 2025 – Present

- Trained ClareonNet from scratch** — 2.08M parameter custom neural network for video super-resolution (100 epochs on RTX 5090, 50 hours). Production pipeline uses **Real-ESRGAN** (3 models: Quality 16.7M, Fast 1.2M, Animation 621K) + **GFPGANv1.4** face restoration + **RIFE v4** frame interpolation, orchestrated by the 30-agent TITAN pipeline
- Built **TITAN v8.0 — 30-agent enhancement pipeline** across 4 squadrons (Pre-Flight, Render, Post-Render, Command) with parallel ThreadPoolExecutor execution, SharedContext for zero-copy data exchange, channels_last GPU optimization (+30% throughput), async 3-thread I/O pipeline, and resolution-adaptive processing
- NEXUS agent optimized to **61ms per batch** (20x speedup) via grouped convolutions and torch.no_grad() — 30 agents at 3.18 fps on 1080p 2x (RTX 4090)
- Cross-platform: **Tauri (Rust)** shell, React 18 + Vite 5, FastAPI backend, NVENC hardware encoding (H.264/H.265/AV1), real AI preview, ETA tracker
- Stack**: Python, PyTorch CUDA, FastAPI, React 18, Tauri/Rust, FFmpeg, NVENC, GFPGANv1.4

NEXUS AI v3.4.1 — Autonomous Intelligence Platform

25 AI Agents · 5 Divisions

RendereelStudio LLC · Desktop Application (Windows) · 17,591 files · 2.76GB ZIP · \$249 license · 2025 – Present

- Built a **25-agent autonomous intelligence platform** with the **IRIS consciousness engine**, voice engine, MCP (Model Context Protocol) integration, and multi-model orchestration across GPU-accelerated inference pipelines. 25 agents across 5 divisions — Core (IRIS, ATHENA, VALKYRIE, SOPHIA, SERAPH), Security (MEDUSA, AEGIS, VIPER, CIPHER, CASSANDRA), Intelligence, Infrastructure, Operations
- Voice engine** with real-time text-to-speech, **WebSocket** communication layer for inter-agent messaging, and persistent **SQLite** knowledge base for cross-session memory
- GPU-accelerated with **PyTorch CUDA**, full desktop GUI via **PySide6/Qt6**, modular agent architecture with dynamic task routing and autonomous decision-making
- Stack**: Python, PySide6/Qt6, PyTorch CUDA, SQLite, WebSocket, FFmpeg

Prometheus Shield v2.5.7 — 17-Layer Code Protection Engine

30 AI Agents · Post-Quantum Cryptography · FIPS 203/204

RendereelStudio LLC · CLI + Desktop (Windows) · 30 AI agents · 46 bugs fixed · 146/146 security tests · \$399 license · 2024 – Present

- Built a **17-layer AST-based code protection pipeline**: String Encryption, Name/Import/Constant Obfuscation, Control Flow Flattening, MBA Transforms, Call Indirection, Polymorphic Decryptors, Dead Code Injection, Opaque Predicates, Watermarking, Runtime Injection, Anti-Decompiler Traps, API Key Protection, Environment Binding, Dynamic Code Loading

- **Post-quantum cryptography:** AES-256-GCM, HMAC-SHA512, ML-KEM-768 (NIST FIPS 203), ML-DSA-65 (NIST FIPS 204) — quantum-resistant key encapsulation and digital signatures
- C-based launcher (102 KB), Nuitka native compilation (Python → 1,574 C files → standalone EXE), anti-debug, anti-tamper, self-healing runtime
- Universal build system: auto-detects dependencies, console mode, stdlib imports after obfuscation. **Verified across 5 production-grade test builds** (see Test Portfolio)
- **Stack:** Python, C, AST transformations, Nuitka, MSVC, post-quantum cryptography, PySide6/Qt6

Brevvo v1.0 — AI-Powered Multi-Tenant Business Operating System [172 AI Agents](#) · [HIVE Swarm Intelligence](#) · [971+ API Routes](#) · [222 DB Tables](#) · [10 Industries](#)

RendereeelStudio LLC · Cloud-Native SaaS (AWS) · 971+ API routes · 222 DB tables · 6 React frontends · 5 CDK stacks · TypeScript · 2026

- Architected a **172-agent multi-tenant business OS** on AWS with the **HIVE system** — a self-evolving autonomous agent swarm (47 files, 40K lines) using **Thompson Sampling** optimization, **PromptBreeder** prompt mutation, and **Swarm Topology** for dynamic team formation. 17 industry-specialized agent squads across 10 business verticals with inter-agent messaging, persistent memory, and genome-based evolution
- **Multi-state tax engine** (42 states + DC with real 2026 bracket data, progressive & flat calculations, Forms 940/941/944/W-2/1099, SUI reports for all 50 states). **Enterprise payroll** (ADP-class: W-4/I-9, benefits, PTO, garnishments). **Full accounting** (double-entry GL, balance sheet, income statement, bank feed auto-categorization). **Workflow execution engine** (8 action types, conditional branching, retry logic, real-time progress). **Recurring billing processor** (auto-charge via Stripe). **Notification rules engine** (15 live metrics, 4 trigger types, 4 delivery channels, template rendering with cooldowns)
- **Full AWS infrastructure via CDK:** 5 CloudFormation stacks, 13 serverless Lambdas, RDS PostgreSQL 17.4 with RLS on **222 tables**, DynamoDB, Cognito dual pools, API Gateway, WebSocket API for real-time updates, EventBridge crons, CloudWatch dashboards, KMS encryption
- **6 React frontends** on Amplify with **57 dashboard components**, mobile-responsive. Credit-based monetization. Direct AI API integration with prompt caching (90% cost reduction) and multi-model routing with automatic failover. Supports **10 industry types** with industry-gated views
- **Stack:** TypeScript, AWS CDK, Lambda, API Gateway, PostgreSQL, DynamoDB, Cognito, SES, SNS, S3, React, Stripe, Plaid, ElevenLabs

BeatSyncPRO.ai — Full-Stack Web Platform & Marketing Site [11 Pages](#) · [Video Players](#) · [Payment Integration](#)

RendereeelStudio LLC · Web Application · Custom HTML/CSS/JS · Responsive · 2026

- Designed and built a **complete web platform from scratch** — landing page, portfolio showcase, and 7 legal pages (Privacy, Terms, EULA, AI Disclosure, Refund, Cookie, Accessibility). Fully responsive with mobile hamburger menu, 480px/768px/1024px breakpoints, fluid clamp() typography
- **4 product deep-dives** with animated SVG icons, GSAP scroll animations, IntersectionObserver reveals, and HTML5 video players with poster overlays, play buttons, and product-themed color glows
- **Payment pipeline:** Payhip e-commerce storefront with **22 live products** across 4 product lines — subscription tiers, lifetime licenses, and credit pack add-ons. Railway webhook → license generation → AWS SES email delivery
- **AWS infrastructure:** S3 CDN hosting 6 clip packs + 4 audio tiers (85.51 GB), SES transactional email, IAM access control
- **Stack:** HTML5, CSS3 (custom design system), JavaScript, GSAP, Payhip, Railway, Netlify, AWS (S3, SES, IAM), Cloudflare

CAPABILITY DEMONSTRATIONS — PROTECTED EXE TEST PORTFOLIO

5 production-grade applications built to validate Prometheus Shield's universal build system. Each compiled to standalone .exe with full 17-layer source protection, zero secrets leaked. All 19 test applications pass (simple through enterprise-grade).

<p>Defense C2 Command & Control</p> <p>Multi-theater tactical simulation with threat assessment, mission planning, asset tracking, encrypted comms, and a full command terminal. 22,031 lines.</p> <p>asyncio · crypto · threading · dataclasses</p>	<p>Wall Street Trading Engine</p> <p>Enterprise fintech engine with order book matching, risk management, portfolio analytics, regulatory compliance, and real-time market simulation. 22,778 lines.</p> <p>decimal · statistics · queue · dataclasses</p>	<p>Distributed Consensus System</p> <p>Raft consensus with leader election, Merkle tree verification, gossip protocol, Byzantine fault tolerance, and cluster state management. 14,744 lines.</p> <p>hashlib · threading · struct · asyncio</p>
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INFRASTRUCTURE & DEPLOYMENT

- **Landing page & portfolio:** beatsyncpro.ai — designed and built from scratch. Full product marketing, 7 legal pages (Privacy, Terms, EULA, AI Disclosure, Refund, Cookie, Accessibility), SEO optimization
- **Credit server:** Flask + PostgreSQL on Railway — 19 REST endpoints, license validation (perpetual + subscription), credit management, Stripe/Payhip webhook integration, subscription lifecycle
- **Cloud & CDN:** Railway (API + credit server), Netlify (static hosting), AWS (SES email, S3 asset storage with 6 clip packs + 4 audio tiers, IAM), Cloudflare (DNS + CDN)
- **Asset pipeline:** 3,000+ AI-generated video clips across 6 themed packs, 240 music tracks across 4 tiers, all hosted on S3 with multipart upload

TECHNICAL SKILLS

AI / Machine Learning

PyTorch CUDA, FP16 inference, custom neural network design & training (ClareonNet 2.08M params), multi-agent orchestration (284+ agents across 6 products), self-evolving HIVE agent swarm (PromptBreeder, Swarm Topology, genome evolution), Thompson Sampling, reward-based learning, cross-session memory, knowledge graphs, LLM pipeline architecture, prompt engineering, prompt caching, multi-model routing, computer vision, audio analysis, super-resolution, temporal processing, RAG, ElevenLabs, predictive analytics

Languages & Frameworks

Python (expert), JavaScript/React 18, Rust (Tauri), GLSL (#version 330), C (launchers/compilation), SQL. Flask, FastAPI, PySide6/Qt6, Vite 5, ModernGL, PostgreSQL, ChromaDB, NetworkX, Rich, prompt_toolkit

Security & Cryptography

17-layer AST code obfuscation, post-quantum crypto (ML-KEM-768 FIPS 203, ML-DSA-65 FIPS 204), AES-256-GCM, HMAC-SHA512, anti-debug/anti-tamper runtime, self-healing, Nuitka native compilation, API key protection, environment binding

DevOps & Cloud

AWS CDK (5 stacks), Lambda (13 handlers), API Gateway, Cognito, Railway, Netlify, AWS (SES, SNS, S3, IAM, Connect, EventBridge, CloudWatch, KMS), Cloudflare, PostgreSQL (RLS, 222 tables), DynamoDB, WebSocket API, Plaid banking integration, Stripe, FFmpeg pipeline engineering (NVENC, concat, filter graphs, multipass), subprocess management, Payhip + webhook integration, license delivery systems, GPU cloud (Modal A100 80GB)

GPU & Hardware

NVIDIA CUDA/NVENC acceleration, GLSL shader programming, ModernGL standalone contexts, hardware-accelerated encoding (H.264/H.265/AV1), 40 years building custom systems, 3 workstations (2x RTX 4090, 1x RTX 5090)

Generative AI & Visual Production

Full local AI pipeline: ComfyUI, Forge WebUI Neo, Flux Dev 1/2, WAN 2.2 (MoE video), Hunyuan Video, LTX-Video, Stable Diffusion (1.5 through SDXL), Flux Krea. Cloud platforms: Midjourney (day-one adopter), Kling AI, Veo 3, Sora, Runway, Pika, Minimax, Luma, Hailuo, Suno. Professional AI production for international clients. Custom model training. 30+ years Adobe Photoshop/Premiere Pro

INTELLECTUAL PROPERTY

U.S. Provisional Patent Application No. 63/920,132 — Multi-agent autonomous video production system with beat-synchronization, 5-wave production pipeline, reward-based learning, and AI vision-driven clip selection. Filed 2025.

PROFESSIONAL EXPERIENCE

Founder & Systems Architect

2024 – Present

[RendereelStudio LLC — Pacific Northwest, USA](#)

Sole architect of six shipped products (4 desktop apps + cloud-native SaaS + full web platform) with 284+ AI agents, a self-evolving HIVE agent swarm, a custom-trained neural network, and post-quantum cryptography. Designed and deployed full cloud infrastructure (AWS CDK 5 stacks, Railway, Netlify), 13 serverless Lambdas, 971+ API routes, 222 DB tables with row-level security, Flask + PostgreSQL credit server, and 22-product Payhip e-commerce storefront. Built multi-state tax engine (42 states + DC, Forms 940/941/944/W-2/1099), ADP-class payroll, workflow execution engine, recurring billing processor, notification rules engine, and full double-entry accounting system. Filed U.S. provisional patent. 200+ bugs diagnosed and resolved across all products.

Professional AI Visual Producer

2021 – Present

[Freelance — International Clients \(including Dubai Government Projects\)](#)

AI image and video production for paying clients on 4 continents. Music video production, high-end visual content. Started on Midjourney from launch day, then moved to running Stable Diffusion 1.5 locally, progressed through SDXL to Flux Dev 1/2 and the latest open-source models. Daily user of ComfyUI and Forge WebUI Neo with cutting-edge models: Flux Dev 2, WAN 2.2 (MoE video generation), Hunyuan Video, LTX-Video, Flux Krea. Experienced with every major AI video platform: Kling AI, Veo 3, Sora, Runway Gen-3/4, Pika, Minimax, Luma Dream Machine, Hailuo. 5 years of daily hands-on generative AI production — from the earliest models through the current state of the art, both local and cloud.

Owner & Operator

1996 – Present

[Multnomah Piercing Studio — Pacific Northwest, USA](#)

30 years running a professional studio. Thousands of client relationships. Client communication, creative consultation, operational discipline, and precision under pressure. Built the business from nothing.

Visual Artist & Photographer

1990s – Present

[Professional — 4 Continents](#)

30+ years across photography, video production, digital art, illustration, painting, mixed media. Every medium of art from canvas to camera to code. Adobe mastery. Traveled and worked in Japan, Amsterdam, Vietnam (12 trips), Costa Rica (6 trips), Central America, Southeast Asia. College and private art school.

DEFENSE & GOVERNMENT RELEVANCE

Clearance-eligible U.S. citizen. Post-quantum cryptography experience (NIST FIPS 203/204). Built and verified a defense C2 command-and-control simulation, financial trading engine with regulatory compliance, and distributed consensus system with Byzantine fault tolerance. Source code protection system uses military-grade anti-tamper, anti-debug, and self-healing runtime. Proven ability to architect complex systems for sensitive domains as a sole developer.

AVAILABILITY

Open to remote and hybrid positions with large companies, startups, SaaS platforms, defense contractors, and government agencies. Also available for enterprise licensing, strategic partnerships, and contract engineering engagements.

DEVELOPMENT HARDWARE

3 custom-built workstations: **2x RTX 4090** (24GB VRAM each) + **1x RTX 5090** (32GB VRAM) on maxed Intel builds. Purpose-built for neural network training, GPU rendering, and real-time inference. On computers since 1987 — DOS, Sierra On-Line, every platform from NES through modern VR. Building custom NVIDIA/Intel systems since the GeForce 8800 series (2006). 40 years through the entire evolution of personal computing.