
01 // PROFILE

19, studying computer science. Four years writing low-level code near the bottom of the stack: reverse engineering, native Windows tooling, kernel internals, static analysis, and binary instrumentation. Built and operated a solo commercial software ecosystem (kernel driver, obfuscated loader, RSA-4096 hardware-bound auth microservice, React dashboard) that peaked at 11,000 active users and 40,000 req/day.

02 // LANGUAGES & TOOLING

C++	Native tools, Win32 API, user-mode & ring-0 driver dev, reverse engineering (SYSTEMS RE)
C#	.NET internals, Blazor/WASM, Span<T> / unsafe parsers, Native AOT (.NET BACKEND)
C	OS theory, bare-metal programming, WDM kernel driver development (LOW-LEVEL OS)
Assembly	x86/x64 instruction sets, compiler disassembly reading, shellcode analysis (x64 STATIC)
Python / TS / SQL	RE scripting, Node.js microservices, WebSockets, PostgreSQL query indexing
Rust / Java	Systems ownership semantics, university algorithm theory & coursework

RE: IDA Free, x64dbg, Ghidra, PE-bear, CFF Explorer, Detect-It-Easy | Debug: Visual Studio, WinDbg, Clang/LLVM Analysis & Net: Wireshark, Sysinternals Suite, HxD, Procmon, Dependency Walker, Scapy, Netcat, tcpdump, Burp Suite

03 // SELECTED SYSTEMS & PROJECTS

FCAT - Client-Side PE Static Analysis Suite

ACTIVE | C# / Blazor WASM

Parses full Microsoft PE/COFF spec including bound/delay-load imports, weighted packer-detection heuristics, and batched 256-byte window Shannon entropy heatmaps scanning 200MB binaries in-browser with zero server.

Sentinel - Real-Time Discord Security & Anti-Raid Engine

ACTIVE | TypeScript / PostgreSQL

Persistent WebSocket gateway with sequence-tracked RESUME, sliding-window ring-buffer join detection, per-route token-bucket rate limiting, and a 14-filter automod pipeline mirrored live to a web dashboard.

Inverse X & License Authenticator

ARCHIVED | C++ / Ring-0 / Node.js

Commercial ecosystem peaking at 11,000 active users. WDM kernel driver mapping physical memory via MDL chains, RC4/hashed-import loader, and RSA-4096 hardware-bound JWT auth backend serving 40,000 requests/day (<10ms).

Manual PE Loader & AVX2 SIMD Memory Scanner

PERSONAL | C++ / Win32 / AVX2

Custom Windows PE mapper handling VirtualAlloc section mapping, HIGHLOW/DIR64 base relocations, ordinal IAT patching, and TLS callbacks; paired with an AVX2 32-byte SIMD signature scanner (<200ms over 4GB address space).

User-Mode Sandbox Engine, Kernel DKOM PoC & Raw-Socket Protocol Analyzer

RESEARCH | C / C++

5-byte splice API hooking framework (NtCreateFile, RegSetValueExW) with call-stack capture and NtMapViewOfSection staging; Ring-0 EPROCESS ActiveProcessLinks/IRP study; and raw-socket TCP/IP sniffer with BPF bytecode filter.

TECHNICAL WRITING (SHSS7.AGENCY/WRITING): [Why C++ Is Worth the Pain](#) | [C# Is Faster Than You Think](#) | [How Windows Actually Loads a DLL](#) | [Writing Your First Kernel Driver](#) | [Windows Scheduler](#) | [Static Analysis in WASM](#)