

# Chip

Reverse Engineer · Security Engineer · Systems Programmer

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## Professional Summary

Curious and detail-driven Security Engineer and Reverse Engineer with a background in electrical systems, programming, and cybersecurity. Known for deep analytical thinking, precision debugging, and an ethical approach to understanding and hardening complex systems. The harder the problem is, the more I want to fix it.

## Key Achievements

- Developed and maintained Direct3D 8/9 wrappers and custom DLL patches restoring legacy PC titles.
- Reverse-engineered field-of-view (FOV) systems in multiple x86 games and implemented user-configurable camera zoom via INI files where the games never originally supported FOV adjustment.
- Reverse-engineered and modernised several classic PC games to support widescreen resolutions, correct aspect ratios, uncapped frame rates, and implemented various quality-of-life, stability, and controller support features in titles that never originally had them.
- Built a Raspberry Pi 5 + Arduino automation system for continuous task execution over two years.
- Deployed a Pi-hole ad-blocking network using Cloudflare DNS-over-HTTPS for privacy and resilience.
- Configured dual-boot Kali + BlackArch on hybrid GPU laptop for full-stack penetration testing.
- Self-taught in C, C++, Python, x86 Intel Assembly, and hex-level analysis, building practical expertise through project-based learning and real-world debugging.
- Created and maintained multiple open-source tools and game fixes on GitHub, with several repositories reaching 9–15 stars and an active community of over 300 members on Discord.

## Core Skills

Reverse Engineering · Offensive & Defensive Security · Systems Programming · Low-Level Debugging · Memory & Pointer Analysis · CTF Design · Steganography · Cryptography · Automation · Hardware Integration

## Experience

### Independent Developer / Security Engineer (2018 – Present)

Develop and maintain compatibility layers for classic PC games. Implement DirectInput and system-level wrappers to enhance functionality. Perform deep crash diagnostics using ProcDump and WinDbg. Create educational CTFs and steganography tools for the security community. Build automation and IoT projects using Raspberry Pi and Arduino platforms.

### Electrical Engineer (Electrotechnical Systems & Equipment)

Diploma in Installing Electrotechnical Systems and Equipment (BSE). Led complex fault-finding, control wiring, data cabling, and certification work across hospitals, offices, and theme parks. Managed teams and apprentices delivering residential, commercial, and industrial installations.

## Tools & Languages

C · C++ · x86 Assembly · Python · IDA · Ghidra · Cheat Engine · x64dbg · WinDbg · ProcMon · Detect It Easy · ProcDump · Linux Command Line · Windows OS

## Values & Interests

Passionate about reverse engineering, cybersecurity, and restoring legacy software  
Driven by a lifelong curiosity for programming, technology, and science.