

# Nkateko Tibane

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## Introduction

Security researcher focused on **vulnerability discovery** and **exploit development**. Seeking to gain experience in a professional environment and contribute to projects at the intersection of **exploit development** and **vulnerability research** on targets such linux userland/kernel, hypervisors, embedded devices and more.

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## Projects & Experience

### Active Capture The Flag Player

- Focused on binary exploitation and kernel research.
- Analyzed and documented complex memory corruption challenges. e.g. pwn writeup

### TibaneC2

- Architected a Command and Control (C2) framework in C and C++ designed for offensive security operations and implant management.
- Designed a robust database model to maintain operator logs and track active session persistence.
- Technologies used: C, C++, Socket/Networking Programming, SQL.

### pwntrace

- Engineered a specialized dynamic analysis tool using the Linux ptrace system call to monitor and manipulate system calls in real-time.
- Optimized the exploit development workflow by allowing researchers to “stub” or intercept syscalls to analyze process behavior under stress.
- Technologies used: C++, Linux System Syscalls.

### Vulnerability Research & Writeups

- Root Cause Analysis and exploits of CVEs, shared publicly on blog posts. e.g. RCA of CVE-2024-22857
  - Focuses on linux userland and kernel memory corruption vulnerabilities.
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## Skills

### Technical Skills

- **Programming Languages:** C, C++, x86 ASM,Python.
  - **Security & Research:** Binary Exploitation (memory corruption), Linux heap and kernel exploitation, Fuzzing, Vulnerability Research.
  - **Tools:** GDB (gef), Binary Ninja, radare2
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## Education

**Bachelor of Science in Information Technology (BSc IT)** | Expected Graduation: 2026

- *Richfield Graduate Institute of Technology*
  - *Relevant Coursework:* Computer Architecture, Data Structures & Algorithms, Operating Systems, Cloud Computing, IOT, Networking.
  - *Skills Gained:* Systems programming foundation, low-level debugging and software architecture fundamentals.