Christian **Gugas**

☎ (512) 677-LULZ | ✉ NULL@NULL.NILL | in CGUGAS | ⚇ CountMurphy | 🌐 HTTPS://RANDOM-HACKERY.NET

Austin, Texas

Software Engineer

About

With 15 years of experience in the software engineering and computer security fields, I have successfully researched, designed, implemented, maintained and delivered many successful projects in a wide variety of roles with a very broad spectrum of subject matter.

Security is a primary focus because it affords an opportunity to constantly learn new and interesting things. Everything needs a level of security, and using that as an entry point, there will always be broad and ever-expanding aspects of technology to explore.

Skills:

- **General**: Security, R&D, Reversing, Exploiting, Networking, Performance, Embedded
- **Languages**: C, C++, Ruby, Python, Assembly, Shell scripting, Lisp, Java, LaTeX
- **Architectures**: X86, X86_64, ARM, PIC, OpenRISC, Z80, ATmega
- **Software**: Linux, Windows, GCC, Clang, GDB, Emacs, IDA, Autotools, CMake

Highlighted Projects

Secure Embedded Operating System
Inverse Limit (for Google) • *2014-2015*

As part of Google ATAP's Project Vault, Inverse Limit's small team of 4 designed and developed a complete computer platform with a security focus. All components are open source; the board schematics, OS, applications, drivers, toolchain, emulator, and even the CPU (based on OpenRISC) have been released to GitHub. Among other things, I was solely responsible for implementing the real-time multitasking operating system for the project.

Launch video (Google I/O 2015): **http://goo.gl/5mZrVR**
Source code: **http://goo.gl/0pbsk7**

X86 Hypervisor and CPU Instruction fuzzer
Inverse Limit (for DARPA) • *2013*

The MAIM project (Micro-architecture Instruction Mining) was one of three Cyber Fast Track proposals that DARPA accepted from Inverse Limit. It consisted of an x86 instruction fuzzer and a cross-platform hypervisor to execute the instructions and compare their behavior on different implementations. The project identified several undocumented differences between Intel, AMD and VIA architectures.

Whitepaper: **http://goo.gl/Kwa3Rf**

Complete TCP/IP Stack for Attack Traffic
BreakingPoint Systems • *2010-2011*

I redesigned BreakingPoint's existing network security test framework from a traffic simulator into a fully featured TCP/IP stack that could test live applications while transparently applying any number of advanced network evasion techniques. At the same time, by integrating concurrency into the new design and strategically replacing components with C extensions, the performance was quadrupled.

Work History

PlayStudios

Software Engineer • *2016-present*

PlayStudios is a mobile gaming company that uses the "Free to play model" for their products. As a Software Engineer I was responsible for creating/maintaining various backend systems used between our many offices, as well as creating new prototypes.

- Maintained and created various web applications ranging from .Net MVC to Angular projects (both AngularJS and Angular 2/4)
- Worked on the company's mass mailer service (AngularJS), Direct Marketing.
- Built features and maintained the Rewards service. Rewards is what made PS games different than competitors: players had a chance to win real world items/discounts with our system. Built with MVC 4
- Created a Rewards kiosk prototype for our partners using Angular 4 and a Surface Pro. Kiosk would contact our servers, redeem the reward in question and print out a voucher on a reciept thermal printer.
- Helped create a design a central configuration management system for our various games.

Ortho Kinematics

Software Developer • *2014-2016*

Ortho Kinematics is a medical company that specializes in spine diagnostics captured from their proprietary VMA system. Clients included various hospitals around the country as well as NASA.

Physician Portal

- Worked on web portal that allowed doctors to better diagnose spinal injuries from recorded "X-Ray" video. The system was built using MVC.Net and Entitiy framework (code first), jquery, and kendo. Was resposible for creating features (such as a user notifications, reporting, implmenting rich text editors) bug fixes (ranging from database optimizations to false positives detected on spine diagnostics).
- Created system to generate charts detailing spinal conditions from raw data and presenting them as html charts and PDFs

VMA Console

- Sole developer on the VMA console system (the machine recorded spinal video with a fluoroscope , packaged it as a DICOM (binary files that are the standard in the medical world) for use in our web portal. The system was built with WPF). Created an update system for the console as well as locked down its security (was vulnerable to SQL injections (amoung other things) when I inheritied it.

Auctiva Corperation

Developer • *2010-2014*

Auctiva was an ecommerce company that specialized in ebay listings, and creating store fronts. The company was aquired by Alibabba and is now defunct.

Auctiva Commerce

- Maintained and developed new features for Commerce, an "estore" generator. Site was constructed with MS SQL, asp.net web forms and jquery.
- Implemented various third party services (Paypal, Google shopping feeds, UPS, etc)
- Wrote several python scripts to generate massive SQL queries
- Created a web API for integration with the 11Main project.

Paytiva

- Maintained Paytiva, an ebay listings generator tool (asp.net web forms and jquery).

11Main

- 11Main was an amazon/etsy clone built with NodeJS. Built several API end points to integrate 11Main with our other products.

California State University Chico

Technical Support • *2007-2010*

- Job responsibilities included working with people to solve simple to complicated problems
- Occasionally the job required script writing and use of backtrack (now known as Kali Linux) for file recovery