

Course Title:	Finding Software Vulnerabilities
Course Code:	COSEINC-FSV
Course Instructor:	Edgar Barbosa
Course Duration:	5 days
Course Fee:	S\$3000 per student
Class Size:	10 students (minimum)
Target Students:	Security Researchers, Security Professionals, Software Developers
Student Prerequisite:	Basic knowledge of assembly language and C ANSI
Software Requirement:	Windbg, OllyDbg, Python
Hardware Requirement:	Laptop computer
Course Brief:	This course will explain the main types of software vulnerabilities. Students will learn how they work and how to find vulnerabilities in real applications. Also, they will learn how to use script languages and frameworks to automate bug finding. With this information, students will then be able to construct more secure applications.
Course Outline:	<p>What is software vulnerability?</p> <p>Types of vulnerabilities</p> <ul style="list-style-type: none"> Buffer overflows Heap overflow Format string bugs Kernel bugs Device driver bugs <p>Shellcodes</p> <p>How to develop exploits</p> <ul style="list-style-type: none"> Exploits in C Exploit in Python <p>How to find vulnerabilities</p> <ul style="list-style-type: none"> Static analysis Dynamic analysis Fuzzing <p>Tools</p> <ul style="list-style-type: none"> Disassemblers Debuggers <p>Automation</p> <ul style="list-style-type: none"> IDAPython Paimei Immunity Debugger <p>Fuzzing</p> <ul style="list-style-type: none"> Network fuzzing File fuzzing Trace-based fuzzing

About the Instructor:	Edgar Barbosa is a security researcher in the Advanced Malware Lab (AML) of COSEINC. He was a member of the team within AML to develop "Blue Pill", a virtual machine rootkit, and has published several papers. Edgar is an expert in kernel and rootkit research.
About COSEINC:	<p>Computer Security Initiative Consultancy Pte. Ltd. (COSEINC) is a Singapore based and privately funded company dedicated to providing highly specialized information security services to our clients. We are a young and dynamic company whose constitution are computer security experts, from diverse backgrounds and geographies, with distinguished credentials and experience.</p> <p>It is our aim to provide our clients with the most professional and competent expertise and services at the most reasonable rates so that they can achieve the highest returns on their information technology investment.</p> <p>For more information, please visit www.coseinc.com.</p>