Wanderley Caloni

Software Engineer

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Cidade onde mora: São Paulo (SP, Brazil)

ABOUT ME

I have been a developer for life since I was a teenager. I love to code and solve problems by coding. I am always in a good mood to learn new things and share my knowledge with people interested as I am. I have 20+ years of experience working on backend complex low level performance required projects, divided in 10+ years in the Information Security area and 10+ years in Financial Markets. I already worked in more than 10 languages as integration tools to C and C++ projects. I know how to use 3 or 4 databases. I love to use scripting to maximize my time (like Python or shell script). I am always looking for opportunities where I can use all my knowledge to develop the best solution on the market. I already participated in successful projects where the team received compliments from our customers, and I want this more.

PROFICIENCY STACKS

C	26+ years	C++	23+ years
Windows	26+ years	Linux	16+ years
Python	15+ years	JavaScript	10+ years

PORTFOLIO

- InteliMarket – High performance market data solution.
- Banco 24 Horas – Secure communication support to nationwide 20k+ ATMs.
- SCUA Logon – Work schedule control for all collaborators remotely.
- EZMarket – OSM with flexible risk rules and resilient B3 account management.
- OpenCS Sniper – Anti-trojan solution with browser shield in kernel mode.
- OpenCS Precise – Identification control based on hardware signature.
- SCUA Security – User access control vulnerability free in kernel mode.

STRENGTHS & SKILLS

- Low level backend solutions using native API (Win32);
- Performance demanding projects in financial market;
- Mentoring and leadership;
- Problem-solving, team worker, self-taught;
- Communicative, empathetic, resilient, organized.

WORK EXPERIENCE

Tech Lead and Sr. Developer

Intelitrader

Fast performance data market solutions.

2020-01 – 2023-01 | São Paulo, Brazil | Business area: Financial market

InteliMarket:

- Main goal: High performance with low computational resources.
- Details and responsibilities: Keep the uptime at 99% and up to date to B3 UMDF protocol last spec.
- Outcome: 2+ clients subscribing to the solution (total 4).
- Technologies: C, C++, Boost.Asio, NoSQL in house solution (tiodb).

MetaTrader Gateway:

- Main goal: High performance order routing.
- Details and responsibilities: Support algo trading with high performance order routing and stable persistence.
- Outcome: Trader customers expansion in our client; success case in the market; recommendation from MetaQuotes.
- Technologies: C++ (STL), Sqlite, MetaTrader SDK.

Owner Developer

BitForge

Low level and high technology

2014-03 – 2019-12 | São José dos Campos, Brazil | Business area: Industrial

ATM:

- Main goal: Secure communication in low network resources.
- Details and responsibilities: Develop and maintain low level protocol using asymmetric cryptography to allow packet exchange and support screen share even in adverse network bandwidth scenarios (e.g. in the middle of Amazonian Forest).
- Outcome: Exchange of 20 years old technology, decreased physical support frequency.
- Technologies: C++ with Boost.Asio, OpenSSL.

Firmware:

- Main goal: Communication between low level firmware protocol and high level Windows C# application.
- Details and responsibilities: Develop and sustain real time communication between a in house firmware and the Windows Operating System thru managed code (C#) and Web API.
- Outcome: Integration between teams and solutions inside the client office.
- Technologies: C++ (STL).

Risk Developer

EZMarket

EMS development to Brazilian market

2011-03 – 2014-02 | São Paulo, Brazil | Business area: Financial market

EZ EMS

Main goal: Develop from scratch broker risk system highly flexible and well tested to be failproof.

Details and responsibilities: Transform the client mathematics formulae to high performance and reliable solution to manage the financial risk of the entire broker.

Outcome: Exchange of solution provider, increased trader final customers; eventually the broker was bought by Nubank.

Technologies: C++ with POCO.

Senior Developer and Tech Lead

Scua
Information security solutions

2008-03 – 2011-03 São Paulo, Brazil Business area: Information security

Disk Cryptography:

- Main goal: Protect data from users and companies using low level cryptography in Hard Drive and Pen Drives (USB).
- Details and responsibilities: This was a tricky project because not always the cryptography worked on every hardware. We had a small team (3, 4 people) and a lot of machines using our product. Sometimes the system boot crashed and we had to analyze the MBR information and to debug the boot process in real mode (8086 assembly) to save the information for the users.
- Outcome: This was one of the best selling products from Scua at that time because big companies loved the idea of a customizable cryptography solution free from hackers of Microsoft trying to break and with a team ready to fix any problems.
- Technologies: Assembly, WDK, Lilo source code, Linux (for the boot CD).

Windows Vista+ Application and User Control System (SCUA):

- Main goal: Update the Windows XP solution to support Vista+.
- Details and responsibilities: The old solution for this product was implemented using a customized GINA (Graphical Identification and Authentication), a module used by Windows to users on the computer, but Windows Vista allowed other identification methods apart from the GINA login screen. Vista implemented the Credential Provider solution, allowing the user to use biometric systems to login on Windows along the user name and password of the traditional login. So we developed a solution based on replacing the UserInit program that runs when the user login is successful to run the system shell (Windows Explorer). Based on that we had to maintain a lot of legacy code that worked based on the GINA communication.
- Outcome: Old customers were able to update the OS to Windows Vista, 7 and newer versions without losing the control provided by the SCUA solution.
- Technologies: WinAPI, Windows Services, Device Drivers (WDK).

Security Specialist

OpenCS
Information and communication security solutions

2005-03 – 2008-03 São Paulo, Brazil Business area: Information security

Sniper:

- Main goal: Protect users from system vulnerabilities when accessing online banking on the computer.
- Details and responsibilities: Brazilian banking system was a target from severals online attacks at that time, and Sniper solution was based on API hook by device drivers, creating a shield to protect users from malicious software running on the computer that detect the bank site access and try to capture the user information to login on the bank. After the first release we had to protect Sniper itself because hackers were trying to reverse engineer our solution, so we developed techniques for anti debugging and string obfuscation. A global log system was created to allow us to analyze some bugs happening only in specific sets of hardware and software. The number of computers where Sniper was installed was counted in hundreds of thousands and some issues were happening in all kinds of sets, like a user running Solitaire in a Windows 98 (we supported NT and 9x architectures).
- Outcome: This product selled to a big bank from the South of Brazil and was the main cause of the company growing in the first two to three years after the first release.
- Technologies: Assembly, WDK, Virtual Machines (VMWare, Parallels, Virtual Box, QEMU).

Security Developer

Scua
Information security solutions

2001-01 – 2005-03 São Paulo, Brazil Business area: Information security

Application and User Control System (SCUA):

- Main goal: Protect the computer from viruses and other threats based on access rules on paths and Windows policies.
- Details and responsibilities: The solution was developed to create a shield that programs can and cannot do based on IO operations (read, write, delete, execute). The main advantage of a system like that is that it does not require constant update like antiviruses and its virus signatures nor requires constant execution to detect suspicious execution based on heuristics. It consumes much lower resources than an antivirus. The solution was developed using device drivers as filter system filter and GINA to authenticate on Windows.
- Outcome: This was one of the nationwide best selling products for security information, appearing in technology magazines. A big client had a success case at that time when a zero day thread started to invade company networks around the world. SCUA didn’t allow this vulnerability to harm the company information in its computers.
- Technologies: WinAPI, Windows Services, Device Drivers (WDK).

EDUCATION

UniBTA

Jan 2005 – Jan 2008

Network Architecture

LANGUAGES

- Portuguese (Native)
- English (Intermediate)