# Luiz Miguel Silva Lima

Software Developer

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- <sup>†</sup>Ourém, Portugal (Willing to relocate)

#### **About Me**

I am a Software Developer with a strong foundation in C/C++, Python and SQL. Solid foundation in data structures, low-level development, and debugging tools. Known for self-motivated learning, clean code, and building things that actually work.

Most importantly... I love to code.

## **Work Experience**

#### SOFTWARE DEVELOPER | Trigénius - Tecnologias de Informação

November 2024 - Present | Portugal

- Developed and maintained scalable B2B software solutions across industries, focusing on automation and business process optimization.
- Collaborated with stakeholders to understand business needs and deliver customized applications.
- Technologies: C#, .NET, Python, SQL, RESTful APIs, TypeScript, Microsoft SQL Server.

#### **EMPLOYMENT GAP**

2022 - 2024 (2 years) | Portugal/Brazil

 Focused on professional development while transitioning internationally. Completed multiple technical certifications and personal projects to sharpen backend & security skills.

#### FREELANCE TECHNOLOGY CONSULTANT | Self-Employed

2016 - 2021 (5 years) | Rio de Janeiro, Brazil

- Provided technology consulting services to small businesses and individual clients;
- Developed custom web solutions and maintained client websites;
- Configured and installed computer networks for small businesses;
- Performed computer maintenance, assembly, and troubleshooting services;

Technologies: JavaScript, Python, Django, SQL, HTML/CSS.

Network/Hardware: TCP/IP, DNS, DHCP, Router, Switch, Firewall, VPN, Wi-Fi.

#### Certifications

Cybersecurity Expert | IEFP (Portuguese Institute for Employment and Vocational Training) - February 2024 - April 2025 | Lisbon, Portugal | *EQF Level 5* - View Certificate

 Secure code development in C, memory vulnerability handling (e.g., buffer overflows), OS/network architecture, and basic reverse engineering & forensics.

CS50 SQL | Harvard University - 2024 - May 2025 | Online - View Certificate

• Schema design, SQL query optimization, and data handling for systems

CS50 PYTHON | Harvard University - 2024 | Online - View Certificate

 Algorithmic thinking and abstraction through object-oriented programming, unit testing, and API integration using Python.

CS50X | Harvard University - 2023 | Online - View Certificate

 C and systems programming: memory management (stack/heap), pointers, segmentation faults, and dynamic allocation. Covered data structures (linked lists, trees, hash tables), algorithmic complexity, and secure coding practices.

# ASSOCIATE'S DEGREE, SYSTEM ANALYSIS AND DEVELOPMENT (INCOMPLETE) UNOPAR University

2019 - 2022 | Rio de Janeiro, Brazil

• Reason for incompletion: International relocation to Portugal.

#### COMPUTER ASSEMBLY AND MAINTENANCE CERTIFICATE | Prepara Cursos

2016 - 2017 | Rio de Janeiro, Brazil

# **Key Projects**

Particle Sandbox Simulation – C++ with SDL3 - Link GitHub

Built a 2D sandbox simulation of particles (sand & water) using real-time physics and density-based interactions.

- Object-oriented architecture with custom physics engine logic;
- Real-time rendering using SDL3;
- Density-based particle movement with vertical forces, side-spread algorithms, and collision handling;
- Memory handling, raw pointers, and simulation loop timing.

Social Network Website - Link Video DEMO | Link GitHub

Full-featured social networking site built from scratch using Django, SQL, and Bootstrap.

- Implemented user registration, login, and profile management with Django Auth;
- Features user posts, comments, and likes using RESTful APIs and AJAX;
- SQLite with efficient query design for scalable performance.

### **Technical Skills**

Languages: C, C++, Python, SQL

Core Concepts: Memory management, Pointers, Recursion, Stack vs Heap, Manual Allocation,

Debugging

Tools: Git, GDB, Valgrind, Make, SDL3

Data Structures & Algorithms: Linked Lists, Trees, Hash Tables, Queues, Sorting, Big-O

Environments: Linux, Windows, CLI, GCC/Clang, Visual Studio

Development Practices: Modular Design, Unit Testing, Secure Coding, Agile

# **Languages & Extras**

Portuguese: Native

English: Proficient (C2 Listening/Reading, C1 Speaking, B2 Writing)

Driving License: A, B;

Availability: Full-time, remote/hybrid, relocation-ready