

# Luiz Miguel Silva Lima

Software Developer

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📍 Ourém, Portugal (Willing to relocate)

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## About Me

I am a Software Developer with a strong foundation in C/C++, C#, SQL and Python. Also, I am well-versed in software engineering tools and methodologies such as Django, FastAPI, .NET, Git, Agile and RESTful APIs.

Most importantly... I love to code.

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## Work Experience

### SOFTWARE DEVELOPER | Trigénus - Tecnologias de Informação

November 2024 – Present | Portugal

- Develop and maintain integrated B2B solutions for diverse clients;
- Work directly with business stakeholders to deliver tailored software solutions;
- Focus on scalability, efficiency, and business process automation;

**Technologies:** C#, .NET, Python, TypeScript, SQL, Microsoft SQL Server, RESTful APIs.

### EMPLOYMENT GAP

2022 – 2024 (2 years) | Portugal/Brazil

*Focused on professional development and education while transitioning between countries;*

- Completed intensive cybersecurity and programming certifications;
- Pursued Harvard CS50 computer science courses;
- Developed personal projects to strengthen technical 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 | IEFPP (Portuguese Institute for Employment and Vocational Training) - February 2024 – April 2025 | Lisbon, Portugal | *EQF Level 5*

- **Programming & Algorithmic Thinking:** logic, pseudocode, exploit creation, secure code design;
- **Operating Systems & Networking:** configuration and administration of client/server OS (proprietary platforms), TCP/IP, stack, LAN setup, network services, OSI model layers;
- **Cybersecurity Fundamentals & Vulnerability Analysis:** explored threat modeling, attack vectors, secure coding principles, and basic vulnerability scanning;
- **Digital Forensics & Evidence Analysis:** introduced concepts of memory and disk analysis, digital trails, and basic incident response strategies.

Link [Cybersecurity Expert Certificate](#)

CS50 SQL | Harvard University - 2024 – May 2025 | Online

- **CRUD queries + Joins:** SELECT, INSERT, UPDATE, DELETE, complex JOINS, subqueries;
- **Relational model & Schema design:** tables, primary/foreign keys, normalization, constraints, triggers;
- **Indexes & Views:** query optimization, performance tuning using indexes, views for abstraction.

Link [CS50 SQL Certificate](#)

CS50 PYTHON | Harvard University - 2024 | Online

- **Object Oriented Programming:** classes, objects, methods, inheritance, encapsulation, polymorphism, SOLID;
- **Error handling & Testing:** exceptions (try/except), unit tests, debugging;
- **File I/O & data parsing:** working with files, CSV, regex, external libraries/API calls;

Link [CS50 Python Certificate](#)

CS50X | Harvard University - 2023 | Online

- **Low-level programming (C / C++):** memory, pointers, segmentation faults, dynamic allocation (stack vs heap), buffer overflow;
- **Algorithms & Data structures:** sorting/search (binary, merge, bubble, selection), recursion, big O notation, stacks, queues, linked lists, trees, hash tables, tries;
- **Abstraction & Encapsulation:** modular design, functions, header files, libraries
- **Resource & Memory Management:** manual allocation/deallocation, file I/O, memory leaks, debugging in C
- **Security & Software Engineering:** secure coding, testing, style checks, real-world problem sets

Link [CS50X Certificate](#)

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

2019 – 2022 | Rio de Janeiro, Brazil

- Reason for incomplection: International relocation to Portugal.

## COMPUTER ASSEMBLY AND MAINTENANCE CERTIFICATE | Prepara Cursos

2016 – 2017 | Rio de Janeiro, Brazil

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## Key Projects

### Particle Sandbox Simulation – C++ with SDL3

*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.

Link [GitHub](#)

### Social Network Website

*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.

Link [Video DEMO](#) | Link [GitHub](#)

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## Technical Skills

Languages: C/C++ | Python | C# | JavaScript | SQL;

Frameworks: Django | Django REST Framework | .NET Framework | FastAPI | Flask;

Databases: Microsoft SQL Server | SQLite;

Tools: Git | RESTful APIs | Unit Testing | Cloud Computing (GCP) | Linux;

Methodologies: Agile | Object-Oriented Programming.

## Languages

Portuguese: Native

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

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## Additional Information

Driving License: A, B;

Availability: Open to full-time positions and remote / hybrid work opportunities.