

Luiz Miguel Silva Lima

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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.

WORK EXPERIENCE

 **TRIGÉNIUS - TECNOLOGIAS DE INFORMAÇÃO** – PORTUGAL
SOFTWARE DEVELOPER – 11/2024 – CURRENT

Develop and maintain integrated B2B solutions for diverse clients, ensuring scalability, efficiency, and business process automation. I work closely with business stakeholders on a daily basis to deliver tailored software solutions that meet specific business demands.

Technical Skills: C#, .NET Framework, Javascript, Typescript, SQL, Microsoft SQL Server, RESTful APIs
Soft Skills: Problem Solving, Verbal Skills, Continuous Learning, Responsibility, Logical Thinking

 **FREELANCER** – RIO DAS OSTRAS, BRAZIL
TECH CONSULTING – 2016 – 2021

Tech consulting for small businesses and individuals. I also addressed specific needs, such as small web developments, network installation and configuration and computer maintenance and assembly.

Web Development: Javascript, Python, Django, SQL and HTML & CSS.
Computer Networks & Hardware: TCP/IP, DNS, DHCP, Router, Switch, Firewall, VPN, Wi-Fi.

EDUCATION AND TRAINING

2024 – 05/2025
CS50 SQL Harvard University

- **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 <https://cs50.harvard.edu/certificates/0857bb30-e812-4cd7-9401-14fdab1e4bb0>

02/2024 – 04/2025 Lisbon, Portugal
CYBERSECURITY EXPERT Portuguese Institute for Employment and Vocational Training (IEFP)

- **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

Level in EQF EQF level 5
Link https://silvalima.dev/tec_certificate.pdf

2024 – 2024
CS50 PYTHON Harvard University

- **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 <https://certificates.cs50.io/220cc048-7394-4f8d-9852-9a68e86c7967.pdf>

- **Low-level programming (C):** memory, pointers, segmentation faults, dynamic allocation (stack vs heap), buffer overflow
- **Algorithms & Data structures:** sorting/search (binary, merge, bubble, selection), recursion, asymptotic notation $O/\Omega/\Theta$, 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 <https://certificates.cs50.io/7d347e6d-6ec6-45ad-96c2-e29d1bc7fd34.pdf>

2019 – 2022 Rio de Janeiro, Brazil
ASSOCIATE'S DEGREE, SYSTEM ANALYSIS AND DEVELOPMENT UNOPAR University (Coursework Completed – No Degree)

2016 – 2017 Rio de Janeiro, Brazil
ASSEMBLY AND MAINTENANCE OF COMPUTERS AND CELLPHONES Prepara Cursos

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 <https://github.com/Aeziren/granular-lab/tree/main>

Image Filter - Low Level Memory Management With C

Uses data and memory management to apply filter to an image To make a filter, the program have to go through all pixels in the images memory and change their byte values.

Link <https://github.com/Aeziren/image-filter>

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

Links <https://youtu.be/SnUs5O5cdOQ> | <https://github.com/Aeziren/social-network>

SKILLS

C | C++ | C# | .NET Framework | Python | Django | Django REST Framework | FastAPI | Microsoft SQL Server | JavaScript | Git | Unit Testing | RESTful api | Linux | Agile | Object-Oriented Programming | Cloud Computing (GCP)

LANGUAGE SKILLS

Mother tongue(s): **PORTUGUESE**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DRIVING LICENCE

Driving Licence: A

Driving Licence: B