RÉSUMÉ · 2026

Gabriel Lucas Barbosa

Computer Science student at UFPR · Research in Explainable AI · Software development

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EXPERIENCE

Software Development Intern

Apr 2026 · present

VER Rodovias · Esteio

- Development and maintenance of internal Python applications, automating processes, optimizing routines and fixing issues in existing systems.
- Improvement of a computer vision system for detecting, tracking, counting and classifying vehicles on highways, focused on the accuracy and reliability of the results.
- Computer maintenance and support, diagnosis of hardware and software failures and implementation of solutions for operational needs.

Undergraduate Research in Explainable AI (XAI)

2026 · present

INCT IACiber · UFPR · C-Bio · CNPq Scholarship Holder

- Research on Explainable Artificial Intelligence (XAI) methods applied to computer vision models, including CNNs and Vision Transformers, with greater emphasis on Transformer architectures.
- Application and evaluation of explainability techniques on real problems, especially medical image analysis, investigating model behavior, decisions and possible limitations.
- Investigation of approaches that use explanations to guide training and improve the performance, reliability and behavior of deep learning models.

Teaching Assistant, Fundamentals of Programming

Mar to Jun 2026

DInf · UFPR

- Support for undergraduate students learning programming logic and Python, with individual in-person sessions to answer questions and work through difficulties.
- Preparation and grading of exercise lists, follow-up on course activities and help understanding programming concepts and practices.
- Creation, on my own initiative, of a public repository with teaching materials, lessons and debugging exercises to support current and future students.

Electrical and Electronics Maintenance Apprentice

Sep 2024 to Dec 2025

Petrobras · SENAI

- Maintenance, diagnosis and failure analysis of electric motors, electrical and electronic equipment, and pneumatic and hydraulic industrial systems.
- Programming and simulation of Programmable Logic Controllers (PLCs) using TIA Portal, applying automation and electrical control concepts.
- Development of an energy optimization solution for offshore platforms using Arduino, C++ and photovoltaic system concepts.

EDUCATION

B.Sc. in Computer Science
Jan 2026 to Jun 2029 (expected)

Universidade Federal do Paraná (UFPR)

Mathematics Teaching degree (transferred to computing)
Jan 2024 to Dec 2025

Universidade Federal do Paraná (UFPR)

Industrial Apprenticeship in Electrical and Electronics Maintenance (1650h)
Sep 2024 to Dec 2025

SENAI / Petrobras

SELECTED PROJECTS

Norte, personal finance manager
A system for managing my personal finances, with bank integration to track accounts, cards, expenses and income in one place. It automatically organizes transactions, identifies spending patterns and works out how much I have available to spend, taking card bills and financial commitments into account.

Personal organizer
An app built to bring different areas of my life together in a single place. It gathers tasks, appointments, calendar, studies, work activities, goals and other day-to-day information.

Open course material for Fundamentals of Programming (CI182/CI240)
A public repository I created on my own initiative to help UFPR students learn programming, including future classes. It brings together 19 lessons, debugging exercises at different difficulty levels, solved problem sets, practical projects and supplementary material. The content is organized to work both as support during the course and as a reference for independent study.

TESSERA-20, 20-bit RISC processor
A processor designed on my own. It includes the instruction set definition, with a load/store architecture and 16 registers, an assembler and a reference emulator in Python, and the single-cycle CPU built in Logisim-evolution. The circuit is validated against the emulator by comparing registers and memory at the end of every program.

SKILLS

LANGUAGES	Python · C · HTML · CSS · SCL
TOOLS	Linux · Git · PyTorch · Captum · Scikit-Learn · Microsoft Office · Figma · Photoshop · TIA Portal · Logisim
SPOKEN LANGUAGES	Portuguese (native) · Intermediate English, focused on reading and writing articles

CERTIFICATIONS

Fundamentals of Interaction Design (20h) · PUC-PR / Apple, 2026

Fundamentals of Programming Logic (20h) · PUC-PR / Apple, 2026

Introduction to the Linux Environment (15h) · UFPR, 2026

Industrial Apprenticeship in Electrical and Electronics Maintenance (1650h) · SENAI / Petrobras, 2025

Teaching Assistantship, Fundamentals of Programming · UFPR, 2026

Web version of this résumé: gabriellb.com.br/cv · updated November 2026