CV · 2026



Electronic Engineering + Software Engineering

DIEGO ARMANDO PINTA CUASQUEN

From sensor to interface.

diarpicu2022@gmail.com github.com/diarpicu2022-commits
LinkedIn mi-portafolio-beta-kohl.vercel.app/en

PROFILE

I study Electronic Engineering and Software Engineering, and I work right where they meet: complete systems that start at a sensor or a microcontroller and end in an interface where data is seen and controlled.

SKILLS

02 **Electronics** · 2 projects
ESP32, Arduino, GPIO, ADC, DAC, PWM, I²C, OLED displays, Sensors and actuators

01 **Engineering** · 1 project
MATLAB, Simulink, Automatic control, Modeling and simulation

10 **Languages** · 10 projects
C/C++, Java, TypeScript, JavaScript, Python, Kotlin, Dart, GDScript

06 **Backend** · 6 projects
Spring Boot, NestJS, Express, FastAPI

08 **Frontend & apps** · 8 projects
React, Next.js, Vite, Tailwind CSS, Flutter, Jetpack Compose, Tauri, Godot

03 **Data** · 3 projects
PostgreSQL (Supabase), MongoDB, Redis, SQLite, Room

02 **Deployment & tools** · 2 projects
Docker, Render, Vercel, Git & GitHub, PlatformIO, Wokwi

LANGUAGES

Spanish · Native
English · English proficiency requirement passed (Universidad de Nariño)

EXPERIENCE

Jul 2025 – Dec 2025
Engineering intern, Innovation Office, Government of Nariño
Designed the enclosure of the NPK device, a soil nutrient sensor, in Autodesk Inventor and took it to a 3D printed prototype.

Repaired the NPK board, replaced its OLED screen and fixed the GPS connection, adding date logging.

Built the NPK page on the office website with a data dashboard, datasheet, manual, request form and role management.

Set up virtual reality headsets with educational apps and staffed the stand at Cumbre CIOS Nariño, La Mejor Taza 2025 and BioExpo 2025.

May 2026 – Oct 2026
Engineering intern, Nariño Social Innovation Center (CISNA), ICT Office-, Government of Nariño
Designed and built a hybrid solar-electric dryer with automated control for parchment coffee, my degree project.

Pilot trial with 2 paired batches, 221 hours and about 139,800 sensor readings.

Coffee dried 12% faster than in open air, and the harvest point forecast cut the median error from 42.6 h to 7.6 h.

Degree project defended on 5 November 2026 before a Universidad de Nariño panel.

Oct 2026 – present
Monitor, Pasto Noticias
Three editable Photoshop templates for social and broadcast (1920×1080 and 1080×1080), with live text layers, photo clipping masks and contrast fixed to AA.

A vertical 9:16 4K looping animated background for the studio screen, built with 31 openly licensed photos of Pasto and their credits.

Photoshop, Motion graphics, HTML to video, Montserrat

Jun 2023 – present
Television assistant, Universidad de Nariño, CECUN
Edited episodes of Chaski, the Universidad de Nariño TV show, in Premiere Pro, including season 4.

Made the 2026 Chaski opening sequence.

Shot field stories on camera and designed graphics, titles and animated pieces for the channel.

Premiere Pro, After Effects, Photoshop, Camera, Motion graphics, Video editing

PROJECTS

01 **SISCAN · Embedded systems engineer and mobile developer** Oct 2026 – present
Smart coffee drying: a hybrid solar-electric system for drying parchment coffee in Nariño, controlled by an ESP32.
ESP32, Automatic control, Flutter, Dart — Case study — Code

02 **NotaScan · UI designer and frontend developer** Oct 2026 – present
Academic grading system: AI reads the handwritten grade, the teacher verifies it and the system stores it.
Tauri, React, TypeScript, Tailwind, Framer Motion — Case study — Code

03 **Ecos de la Tierra · Game developer** Sep 2026 – present
Turn-based 2D pixel-art RPG about environmental awareness, exportable to PC and Android.
Godot 4, GDScript, Python — Case study — Code

04 **CampusWatch / Agenda · Android developer** Sep 2026 – present
Personal Android planner for people who study and work, with a Wear OS module and encrypted data.
Kotlin, Jetpack Compose, Wear OS, Room, SQLCipher — Case study — Code

05 **HidroMon · Backend developer** Oct 2026
REST API to monitor crop humidity with IoT sensors and threshold alerts.
NestJS, TypeScript, Node.js — Case study — Code

06 **SETPasto+ · Content designer and web developer** Aug 2026
Redesign of Pasto's public transport portal, with a content and voice audit, in four languages.
Node.js, Express, EJS, Tailwind — Case study — Code

07 **EcoVolt · Backend developer** May 2026
Solar energy monitoring and analysis to optimize panel performance.
Python, FastAPI — Case study — Code

08 **AgroPulse · Full-stack IoT developer** Mar 2026 – May 2026
End-to-end greenhouse monitoring: the node reads temperature, humidity and soil, and drives the pump, fan, heater and door.
ESP32, C++, PlatformIO, Java 17, Spring Boot, Supabase, Docker, React, TypeScript — Case study — Code

09 **Harmonia · Full-stack developer** Apr 2026
Smart music player powered by AI.
Express, TypeScript, MongoDB, Redis, Groq, OAuth, React, Vite — Case study — Code

10 **Proxy IA · Backend developer** Apr 2026
AI generation platform using the Proxy pattern to enforce per-plan quotas and rate limits.
Java, Spring Boot, React, Docker — Case study — Code

11 **Tower Defense · Game developer** Mar 2026
Tower defense game that uses the Decorator pattern to upgrade towers in real time.
Java, Canvas 2D, REST API — Case study — Code

EDUCATION

Ongoing
Software Engineering · fifth semester
Universidad Cooperativa de Colombia (UCC)

2021 – 2025
Electronic Engineering
Universidad de Nariño

2020
Technician in Specialty Coffee Production
SENA, Nariño

2022
Technician in IT Support and Systems
INETCOL