Jessica Stephanie Garcia Monjaraz

Electrical & Electronics Engineering Student — Automation & Data Systems Enthusiast — Aspiring Software Engineer

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Committed to the belief that great technologists can come from anywhere.

SUMMARY

Engineering student with hands-on experience in embedded systems, automation, and scalable data pipelines. Proven ability to collaborate in agile and cross-functional teams, with a strong foundation in Linux environments, software engineering principles, and version control (Git). Passionate about using technology ethically to create inclusive, accessible solutions that address real-world challenges.

EDUCATION

UNAM – Facultad de Ingeniería, Ciudad de México
Bachelor's in Electrical and Electronics Engineering – Robotics and Control Track
Expected graduation: December 2025

- **Thesis:** *Rightma Sense: Wearable postural monitoring system for visually impaired individuals using IMU and haptic feedback*, integrating embedded firmware and ROS-based data pipelines.
- Participated in biomedical and automation projects with social applications.
- Relevant coursework: Data Structures, Operating Systems, Digital Design, Control Systems, Microcontrollers, Systems Programming.

EXPERIENCE

Data Contributor – Open Source Collaboration Mar. 2025 – Present
Built Python tools for dataset comparison and identity verification. Improved data validation and reporting logic. Worked remotely with international teams using GitHub and CI workflows, increasing processing accuracy and reliability.

Developer – DGAPA Educational Tech (UNAM) Oct. 2024 – Present
Created a modular web interface for STEM learning tools. Enhanced accessibility and user flow. Managed source control and contributions through pull request cycles in Git.

PROJECTS

Rightma Sense – Postural Monitoring System
Wearable embedded system using MPU6050 and vibration motors. Firmware developed in C and Python; data logging and feedback loop implemented with ROS. Real-world tested and validated for accessibility applications.

ShellBoxPlay – Terminal Game Suite in Bash
Interactive suite using pure Bash scripts, including user authentication, ASCII graphics, and integrated MP3 playback via `mpg123`. Focused on modularity, process control, and secure I/O.
GitHub: https://github.com/StephMonjaraz/ShellBoxPlay

TiendaC – C-based E-commerce Simulation
Console application in C with modular logic, dynamic memory management, file persistence, and user input validation. Emphasized memory-safe design without external libraries.
GitHub: https://github.com/StephMonjaraz/StructuredRetailApp-C.git

Flood Alert Simulation – LabVIEW
Developed a threshold-based disaster alert model for flood response using simulated water levels and feedback logic. Designed for real-time visualization of critical alert conditions.

FOCUS AREAS

Software Engineering · Embedded Systems · Bash Scripting · Automation · Infrastructure · Open-Source Collaboration · Ethical Tech

TECHNICAL SKILLS

Languages:	Python, C, C++, Bash, Java, SQL
Frameworks/Tools:	Git, GitHub, Linux, ROS, LabVIEW
Hardware:	Embedded C, PCB Design, IMUs, BLE modules
Other:	Data processing, control systems, debugging, systems programming, Agile practices

LANGUAGES

Spanish – Native
English – Advanced (C1) – Proficient in technical communication