

Juan Javier Ramírez Magaña

IT Infrastructure · Networking · Technical Support

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PROFESSIONAL SUMMARY

Engineer with 15+ years of hands-on experience in IT support, networking and infrastructure for businesses and professional firms. Background in GPON fiber data services (Totalplay), network security with firewalls and switches, Windows and Linux administration, and Proxmox and Docker virtualization. I pair component-level hardware troubleshooting with Python and PowerShell automation. Currently preparing for the Cisco CCNA.

TECHNICAL SKILLS

Networking: LAN/WLAN, routers, switches and firewalls; GPON fiber/ONT; DNS (AdGuard Home); PoE IP video surveillance

Systems & infrastructure: Windows and Windows Server, Linux; Proxmox VE (VMs and LXC); Docker and Docker Compose; backups and monitoring; UPS

Support & repair: Remote and on-site support; component-level diagnosis and repair (laptops, PCs, printers, TVs, game consoles); preventive and corrective maintenance

Programming: Python, C/C++, JavaScript/Node.js, PowerShell, SQL, HTML/CSS, PHP; React and Vue; .NET and VBA; Git/GitHub

Applied AI: Ollama and local models (Qwen, Llama, DeepSeek-Coder); MCP servers (FastMCP); local/cloud LLM routing (AWS Bedrock, Gemini); Whisper; RAG and chatbot solution design

Embedded & IoT: ESP32 / ESP32-S3 / ESP32-C3, Arduino, Raspberry Pi; C/C++ with PlatformIO and FreeRTOS; MQTT, Home Assistant, ESP-NOW, OTA; LVGL; I2C, SPI, UART; ISP programming

PROFESSIONAL EXPERIENCE

Senior IT & IoT Consultant · Self-employed (freelance)

2024 – Present

Mexico City · remote and on-site

- Provide remote and on-site IT support to accounting and architecture firms: networks, workstations, UPS units and Windows servers (setup, backups and monitoring).
- Design PoE IP video-surveillance installations: camera selection, cabling plan, connection diagram and a visual mock-up of each camera's placement for the client.
- Designed and run a Proxmox homelab (VMs, LXC and Docker) hosting a private AI stack: local models on Ollama, a semantic router that keeps confidential prompts on local models and sends the rest to cloud LLMs, and an MCP server that lets a Telegram agent manage Proxmox and AdGuard DNS.
- Diagnose and repair laptops, PCs, printers, TVs and game consoles down to component level, delivering written diagnostic reports with photos, actions taken, the fix and a quote.

Infrastructure Specialist · Totalplay

2022–2023

Mexico City

- Supervised GPON fiber-optic data services; provisioned and configured ONTs, routers and TV equipment.
- Configured network security (firewalls and switches) and installed wired and wireless networks for customers.
- Diagnosed and resolved network and fiber-optic incidents on-site and remotely.

Data Analyst & Junior Developer · Vetco Gray (GE)

2021

Mexico City

- Built real-time KPI dashboards with .NET, Excel/VBA and SQL database connections.

Independent IT Technician & Consultant · Self-employed

2011–2020

Mexico City · on-site and remote

- Installed and maintained Windows Server machines and networks for small offices: setup, backups and monitoring.
- Repaired and maintained laptops, PCs, UPS units and printers for homes and businesses, with written diagnostics and quotes.

Technical Support Consultant · Iusacell

2010–2011

Mexico City

- Provided specialized technical support to mobile users and provisioned data services remotely.

Programmer Analyst · RAM Software y Soluciones

2004–2006

Mexico City

- Performed preventive and corrective maintenance on computer hardware.

SELECTED PROJECTS

Private AI stack on a homelab

2026

Semantic request router (local vs. cloud, fail-closed for confidential data) with a rules dashboard, an MCP server for Proxmox and AdGuard, and a Whisper transcription server. Stack: Python, FastMCP, Docker, Ollama, Proxmox.

IP video-surveillance project

2026

Residential technical proposal: 3 PoE IP cameras (bullet and dual-lens PTZ), cabling plan, connection diagram and a placement render over the façade. Stack: PoE IP cameras, PTZ, structured cabling.

ESP32-C3 smart switch (Tuya chip replacement)

2026

Replaced the burnt BK7231 Wi-Fi module of a Tuya switch with an ESP32-C3 on the original PCB; custom firmware with web UI, mDNS and pump control, plus a documented root-cause analysis of resets. Stack: C++, ESP32-C3, PlatformIO.

ESP32 liquid-level monitoring system

2025

Modular firmware with an animated web dashboard, a 3-language captive portal, ESP-NOW mesh, MQTT with Home Assistant auto-discovery, OTA and WebSerial. Stack: C++, ESP32, MQTT, Home Assistant, ESP-NOW. github.com/Kirajav/ESP32_OTA_WebServer_NivelDeAgua

EDUCATION

Communications and Electronics Engineering

2015–2020

ESIME Zacatenco, National Polytechnic Institute (IPN)

Computer Engineering

2005–2008

School of Engineering, National Autonomous University of Mexico (UNAM)

Certifications in Progress: Cisco CCNA certification, in preparation

Languages: Spanish (native) · English (advanced, C1) · Japanese (basic)