Luis Enrique Villalobos Esparza

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Professional Profile

Software Development Engineer with experience in web application development, data-driven systems, and technology projects. Participation in artificial intelligence, picosatellite, and mobile application projects for monitoring and managing daily water consumption. Proficient in Angular, Ionic, and Python, with a strong focus on scalable and efficient solutions.

Education

Universidad Tecnológica de Calvillo	Aguascalientes
Ingeniería en Tecnologías de la Información e Innovación Digital	2023 – 2026
Área: Desarrollo de Software	Average: 9.9	

Experience and Projects

MediAI+ — UTC
Artificial Intelligence Developer — Sep 2025 – Dec 2025

- Developed a breast cancer classifier using Deep Learning with CNN and Transfer Learning (VGG16) in TensorFlow and Keras, applying preprocessing, data augmentation, and model validation.
- Implemented a REST API using Flask for automated inference and integration with external applications, enabling real-time medical image classification.

CanSat — UTC
Embedded Systems and Software Developer — Sep 2025 – Oct 2025

- Developed a picosatellite for real-time acquisition and transmission of atmospheric data during a simulated mission.
- Implemented embedded software on Raspberry Pi Pico using C++ and MicroPython, integrating sensors and LoRa wireless communication for telemetry with a ground station.

SmartStream — UTC
Mobile / IoT Developer — Sep 2024 – Dec 2024

- Developed an IoT system for real-time monitoring and control of water consumption using sensors, valves, and data processing.
- Implemented the mobile application using React Native (Expo, TypeScript) and integrated backend, database, and Arduino-based hardware control for system automation.

Certifications

Scrum Fundamentals Certified	SCRUMstudy, 2025
Ionic 7	Udemy, 2025
Internet of Things (IoT)	Udemy, 2025
MongoDB	Udemy, 2025
Mendix Rapid Developer Certification	Mendix, 2025
Python Programming Basics	Huawei Talent Online, 2025

Technical Skills

Languages: Python, JavaScript, TypeScript, C++
Frontend: React, Angular, Tailwind CSS, Bootstrap
Mobile: React Native, Ionic
Backend: Node.js, Flask, REST APIs
Databases: MongoDB, MySQL
IoT: Arduino, sensors, telemetry, LoRa
Version Control: Git, GitHub

Soft Skills

Organization, teamwork, responsibility, logical thinking, resilience.

Languages

Spanish	Native
English	B1 Level (estimated)