Raúl Eleusis Pérez Carretero

Phone: +52 3314156160 | Email: eleusis.carretero@gmail.com | LinkedIn: [Raúl Eleusis Pérez Carretero](www.linkedin.com/in/raul-eleusis-perez-carretero)

Professional Summary

Test Automation Engineer with extensive experience in the automotive industry, specializing in innovative solutions for validating sensor drivers in autonomous vehicles. Proficient in designing test cases based on sensor driver requirements and automating them using Python. Skilled in developing Python classes to mock sensors (e.g., LiDARs and encoders) via UDP messages, enabling advanced testing scenarios such as fault injection and transmission adjustments. Committed to ensuring system quality, stability, and performance through efficient processes and innovative automation solutions.

Technical Skills

- Programming Languages: Python, C embedded
- Testing and Automation: Unit Test (Tessy, PTU, unittest), Testrail, Trace32, HIL benches, Pytest, Slash, Selenium, Appium
- Tools and Frameworks: Git, GitHub, Jira, IMS, FreeRTOS (Basic)
- Hardware Knowledge: Oscilloscope, Multimeter, Function Generator, Power Sources
- Other Skills: Encryption Algorithms (AES), Basic Android Application Development

Professional Experience

Software Development Engineer in Test: Python

Cruise | GM
Nov. 2022 - Present | Zapopan, Jalisco
- Developed Python classes to mock sensor data, inject faults, and verify component driver detection via ROS diagnostics.
- Designed and maintained automated test cases for automotive sensors using Python.
- Conducted testing on HIL benches with Docker images mounted on Linux OS.
- Managed software versions using Git.

Embedded Software Developer

Vitesco Technologies
Jul. 2021 - Sept. 2022
- Developed and maintained embedded C code for ECUs.
- Performed unit tests to validate embedded code using Tessy and PTU.
- Imported stakeholder requirements into internal documentation.
- Tested code on HIL benches using Trace32.

Product Engineer

Continental Automotive
Apr. 2018 - Jul. 2021

- Improved first-pass yield (FPY).
- Monitored Jidoka inline production processes.
- Automated KPI file generation using Excel macros.

Education

Instituto Tecnológico y de Estudios Superiores de Occidente (ITESO)
Specialization in Embedded Systems (2020 - 2021)
- Academic experience in FreeRTOS (basic) and AES encryption algorithm development.
- Designed and programmed basic Android applications.

Centro de Enseñanza Técnica Industrial (CETI)
Bachelor's Degree in Mechatronics Engineering (2014 - 2018)
- Thesis focused on the automotive industry and AES encryption, utilizing Android applications for smartphones and smartwatches.

Languages

Spanish: Native | English: Advanced | Chinese: Basic (Currently studying for HSK 1)