



Nil Munté Guerrero

Telecommunications Engineer
MSc in AI

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ABOUT ME

With a Telecommunications Engineering degree, a Master's in Artificial Intelligence, and hands-on experience in embedded systems, software development, and data-driven applications and education, I bring both technical depth and project management skills to deliver impactful solutions. I'm always trying to get involved into local projects and I'm really into electric mobility

KEYWORDS

- Embedded Software
- Telecommunications
- Radiofrequency
- Network Management
- Data Acquisition
- Data Science
- Software Engineering

PROJECT LINKS

-  [Traffic object detection](#)
[Occupancy detection](#)
-  [Radar Acconeer XM132](#)
[Radar Texas AWR1642](#)
[Radar Texas IWR1443](#)
[Sincronization Gran Canaria \[Julia, Fortran code\]](#)

EXPERIENCE

ADAS & AV Functions Developer Engineer. Project Manager May 24 – Now
Applus+ IDIADA

- Developed and ADAS EuroNCAP testing project on evaluating an AI-camera system, from client meetings (*KPI definition, report and testing discussion*) to implementation (*DevOps: CI/CD pipeline, test automation, infr. management*).
- Configured the system to capture the sensor information and trigger the tests together with the software team (*Embedded Software, CAN, C++, Python, Linux*).
- Worked in a Computer Vision ADAS project, integrating data from different sensors with CNNs and working with different algorithms (*YOLO, segmentation, tracking*).
- Created a reporting tool to show the results to client, with high impact result (*HTML, CSS, JavaScript -React-, Python*).
- Directed as **Project Manager** two European Projects in the Autonomous Mobility field (*AITHENA, AIGGREGATE*). AITHENA involved the coordination of several companies across Europe, successfully reaching the milestones of the project.

R&D Engineer Sep 23 – Apr 24
ALEPHSYS LAB. Universitat Rovira i Virgili (URV)

- Focused on Deep Learning and Complex Networks algorithms.
- Studied and developed different Supervised and Unsupervised learning algorithms (Neural Networks, SVM, BP, etc.) (*Java, C, Python, Julia*).
- Studied and implemented an algorithm, using ODEs, for describing a dynamical model for Power Grid Frequency Fluctuations, analysing and using real data from 'Red Eléctrica' and other public sources (*Linux, Fortran*).
- Hardware implementation (Linux management)

R&D Engineer Mar 21 – Aug 23
NEPHOS LAB. Universitat Rovira i Virgili (URV)

- Focused on Embedded Systems and Microcontrollers (*PIC, ESP32, Silicon Labs RadioBoards, Arduino*).
- Using a different Texas Instruments' millimeter-wave *FMCW radars* and a *Raspberry Pi*, developed an occupancy detection system for vehicles. Designed and implemented a hand-gesture detection and classification system (*MATLAB, Python*) [1][2].

Software and Hardware Engineer Intern Nov 20 – Mar 21
Generation RFID.

- Optimized the power consumption of an HF-RFID embedded system prototype using *Simplicity Studio* and the *Silicon Labs Blue Gecko Radio Board* to measure and analyze power consumption (*C, Python, Scons, Bootloader*).

Associate Professor Sep 21 - Now
Universitat Rovira i Virgili (URV)

- Taught the following [courses](#) on the Telecommunications Degree: IoT (*WiFi, Zigbee, Bluetooth with Arduino and Simplicity Studio*), FPGA and Microcontrollers programming (*VHDL, C, ensemble language*) and communications (*MATLAB*).

Python Trainer Apr 24 – Now
Acadèmia Gaudí

- Designed and taught two Python Courses (Introduction and Advanced Python) of 6h duration.

EDUCATION

Master's degree in computer security and Artificial Intelligence 2022 - 2023
Universitat Rovira i Virgili (URV). Tarragona (9.42/10, 8 Honors).

Telecommunications Engineering 2017 - 2021
Universitat Rovira i Virgili (URV). Tarragona (9.01/10, 16 Honors).

- Class representative in the 2nd, 3rd and 4th year

COURSES

- AWS Cloud Practitioner. URV Microcredentials. 2025.
- MBSE in practice using ARCADIA and CAPELLA. Samares Engineering. 2025.
- Project Manager Course. Abilities to manage and handle as Project Manager Applus+ IDIADA projects. APPLUS+ IDIADA. 2024.

SKILLSET

Programming Frameworks. Git, ROS, CAN, C++, C, Python, MATLAB, VHDL, Ensemble Language, Fortran. Operative Systems and Tools: Linux, Simplicity Studio, Xilinx ISE.

Hardware programming & Embedded Systems. PIC microcontrollers, Texas Instruments' millimeter-wave FMCW radars, FPGA development, Silicon Labs Radio Boards, Arduino.

Machine Learning & Data science. SciPy, Numpy, Pandas, Keras, PyTorch, Tensorflow, OpenCV, Yolo, GPTs (Gemini, OpeAI, Llama), IA Agents (n8n).

Databases & Data Management. AWS, SQLite, MySQL, MongoDB

Other skills. KPI definition, Project Management.

Languages. English Advanced Level (CAE-C1), Spanish (Native), Catalan (Native).

PUBLICATIONS

[1] Munte, N., Lazaro, A., Villarino, R., & Girbau, D. (2022). [Vehicle occupancy detector based on FMCW mm-wave radar at 77 GHz](#). IEEE Sensors Journal, 22(24), 24504-24515.

[2] Lazaro, A., Munte, N., Villarino, R., & Girbau, D. (2023, November). [In-Vehicle Monitoring Based on a Low-Cost mm-Wave Radar at 60 GHz](#). In 2023 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference (IMOC) (pp. 241-243). IEEE.

AWARDS

Extraordinary Final Degree Award in Telecommunications Systems and Services Engineering in recognition of the best students of the 2020-2021 graduating class. COETCC. Universitat Rovira i Virgili (URV). 2022.

2nd COITT Award "Future of Telecommunications" - TELECOMMUNICATION SYSTEMS ENGINEERING CATEGORY. Official College of Telecommunication Engineers (COITT). COITT. 2022.

Youth Research Awards (PRJ 2017) with the research work "Electronic Noses - Smell on a Chip". Generalitat de Catalunya. 2017.