Antonio
Lotti Villar

Junior Systems Electronics Engineer

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RESUME

Electronics enthusiast with a deep professional interest in **embedded systems development**, especially in the area of **firmware development**. Some experience with technologies such as **ARM microcontrollers, RTOS systems, Threads, Process, IoT and FPGAs**. Proactive engineer, committed to continuous learning and adaptation to new methodologies and tools.

EDUCATION

- **Polytechnic University of Madrid (UPM)** Madrid, Spain
  Master's degree in electronic systems engineering *Sep. 2023 – Act*

- **Alfonso X The Wwise university (UAX)** Madrid, Spain
  Degree in Industrial and Automatic Electronic Engineering *Sep. 2019 – July. 2023*

EXPERIENCE

- **Capgemini S.A.** Madrid, Spain
  Junior System Engineer *July 2024 – Act*
  - **Development Projects**: Embedded systems development projects with clients such as Airbus and Indra

- **Indra Systems, SA** Madrid, Spain
  Laboratory Technician *Feb. 2023 – Feb. 2024*
  - **Microcontrollers**: Optimization the programming of PIC microcontrollers.
  - **Hardware Testing**: Responsible for the assembly, testing, and implementation of various hardware components.

PROJECTS

- **Embedded Systems Projects – Master's Program**: Designed and implemented embedded systems solutions using the STM32F411 DISCOVERY board, focusing on finite-state machines, sensor integration, and real-time task management with FreeRTOS.
- **Finite State Machine (FSM) Library Testing with Ceedling**: Developed and tested a Finite State Machine (FSM) library in C using Ceedling, ensuring robustness through unit testing and automated validation.
- **Virtual Control of a Robotic Arm**: Developed a simulation environment for controlling a five-degree-of-freedom robotic arm, enabling motion testing before physical implementation. Applied skills in robotic kinematics, MATLAB programming, Arduino communication, and automation system design.

SKILLS

- **Programming Languages:**: C, C++, Python, Matlab, Java, Javascript

- **Tools**: GDB, GCC, Git, Unity(testing), Ceedling(testing), Eclipse, VS Code, Altiumn, Multisim, LTspice

RESOURCES

- **Languages:**: English, Spanish

- **Citizenship's:**: Spanish; American (USA); Italian