Jorge Benavides Macías

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WORK EXPERIENCE

Quandum Aerospace S. L.   **Mar. 2024 – Present**
Electronic Engineer - Researching and development   *Málaga, ES*

- **Electronic Design and Prototyping**: My actual work is to design and develop a wireless power transmission system for a vertical wind generator, create schematics and PCB layouts using Altium Designer.
- **Microcontroller and FPGA Programming**: Develop control electronics using STM32 microcontrollers, a ESP32 with real time operating systems and FPGA modules for camera control.
- **Cross-Department Collaboration and Versatility**: Collaborate with mechanical and fabrication departments, assist with server administration, mechanical design in CATIA, PLC programming, and Linux system management, leveraging a broad skill set to support various project aspects.

DHV Technology   **Sep. 2023 – Mar. 2024**
Electronic Engineer   *Málaga, ES*

- As a member of the electrical department, I design solar panels for space applications and other power subsystems for various platforms. I use tools such as **SolidWorks for 3D modelling and Altium for PCB design.**

PROJECTS

Final Degree Project: Designing for Data Acquisition with PSoC - [Paper](#)

- Designed a circuit board for acquiring data from piezoresistive sensors integrated into a robotic manipulator's gripper.
- Led circuit design, component selection, material procurement, and PCB trace routing.
- Developed C code for PSoC ARM, implementing SPI and UART communication protocols.

LaCaja - [News](#) | [Web](#) | [Video](#) | [Github](#)

- Crafted an AI-driven escape room experience featuring "Chiquito de la Calzada," offering participants a chance to win a position at Google.
- Contributed significantly to software and hardware, developing two games and managing soldering and connections.
- Earned the opportunity to visit Google's Malaga offices and present the project.

Digital Design and VHDL Development - [Github](#)

- Proficient in designing, simulating, and synthesising digital circuits using VHDL.
- Developed diverse testbenches, from debouncers to factorial calculation systems, and integrated MicroBlaze IP core into a Mastermind-like game.

EDUCATION

Universidad de Málaga   **September, 2023**
Bachelor of Electronics, Robotics and Mechatronics, Major in Robotics and Automation   *Málaga, ES*

- I achieved Summa cum laude in my final degree project and in industrial computing, which was a course focused on microcontrollers.

CERTIFICATIONS, SKILLS & INTERESTS

- **Certifications:** Preliminary English Test (PET) | Level B1 Cambridge Assessment English.
- **Skills:** Teamwork, Creativity, Customer orientation, results orientation, Eagle, Altium, Bash, Linux, C/C++, Python, VHDL, I2C, ARM, Microcontrollers, UART, SolidWorks, Git.
- **Interests:** Film buff, free Software, emacs, electronic design, programming.