

Ronel Herzass

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Summary

Junior Embedded Engineer and Signal Processing enthusiast with hands-on experience in **firmware development**, **custom PCB design**, and **digital signal processing**. Skilled in **C/C++**, **microcontroller architecture**, and integration of peripherals using **SPI**, **UART**, and **I2C**. Strong background in **electronics testing**, **communication protocols**, and **simulation tools** to deliver efficient hardware–software solutions.

Experience

TM&SM | Robotics Instructor | 2024–Present

- Developing and troubleshooting **MicroBit-based robotic systems**.
- Implementing **sensor integration** and control logic in **Python** to enhance robot responsiveness. Maintaining **embedded hardware** and ensuring compliance with safety and performance parameters.

Ariel University | Teaching Assistant | 2023–2024

- Translated **Python** simulations to **C++**, increasing execution speed by 30% for electron behavior models.
- Designed a **custom PCB** and programmed **Arduino firmware** to automate battery testing, improving efficiency by 50%.
- Guided students in **electronics labs**, enhancing understanding of **microcontroller systems** and **signal processing** concepts.

IDF | Clearance Level 3 | 2017–2020

- Collaborated within multidisciplinary teams to achieve mission objectives efficiently.

Education

Ariel University | Expected graduation 2026

B.Sc – Bachelor of Science in Electronics and Electrical Engineering

- Relevant Coursework: **Microcontrollers** and **Embedded Systems**, **Digital Signal Processing**, **Computer Architecture**, **Data Structures in C++**.
- Lab Work: Developed and tested **RS232**, **UART**, **SPI**, and **I2C communication** protocols.
- Tools: **Linux**, **Python simulations**, **Oscilloscope**, **logic analyzer**, **circuit debugging**.