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++**, **Python** and **MATLAB**. Strong background in **electronics testing** and **simulation tools** to deliver efficient hardware–software solutions.

Experience

Technoda Medicine and Science Museum | Robotics Instructor | 2024-Present

- Developing and troubleshooting **MicroBit-based robotic systems**.
- Implementing **sensor integration** and control logic in **Python** to enhance robot responsiveness.

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 2027

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

- Relevant Coursework: **Control Systems**, **LTI Systems**, **Digital Signal Processing**, **Computer Architecture**, **Data Structures in C++**.
- Lab Project: Designed and built a **Digital Safe Lock System** using discrete logic and analog components. Project Write-up
- Tools: **Oscilloscope, Soldering, Circuit Debugging, Python Simulations.**

Selected Project

SonicScope – Real-Time Audio Analyzer: Python-based independent tool for live waveform and **FFT** visualization. GitHub