NA

Nour Abed

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Dear Admissions Committee,

Every evening at around seven, the fourteen families in the building where we were living in Deir al-Balah switched on their washing machines and water pumps at almost the same moment, and the solar battery we shared cut out. For my final-year project I set out to stop that from happening. I built a monitor from an ESP32 and two current sensors that showed each household, on a small screen by the door, how much power the battery could spare in the next hour. Over the following three months the battery cut out twice a week instead of almost every day. That project is why I am applying for the MSc in Computer Engineering at Politecnico di Torino, on the Embedded Systems track.

The monitor worked, but I built much of it by trial and error. I chose the sensors from forum posts, and I tuned the battery estimate by watching it fail. I want to learn to do this properly: to design the hardware and the firmware together, to think about power from the first sketch, and to test a device before fourteen families depend on it. The Embedded Systems track is organised around exactly these questions, and its project courses would let me work on real boards rather than in simulation. Turin matters to me as well. Its long tradition in automotive electronics makes it a place where small, reliable, low-power devices are designed for millions of users.

I graduated in 2025 with a BSc in Computer Engineering from the Islamic University of Gaza, with a GPA of 3.71 out of 4, fourth in a class of 63. I completed my last two semesters online while my family moved three times. Since then I have worked for 18 months as a junior firmware developer for Nabd Metering, a small company in Amman that makes smart electricity meters. Working remotely, I wrote the over-the-air update module that now runs on about 2,000 meters, and I learned how expensive a single bug becomes once a device is on someone’s wall.

After the degree I want to spend a few years in industry, in energy or automotive electronics, learning how reliable products are designed, tested and certified. Then I want to return to the region and build affordable metering for the small shared solar systems that so many buildings at home now depend on.

Thank you for considering my application. I would be glad to send the project report or the firmware repository if either would help.

Sincerely,

Nour Abed

WRITTEN WITH HUMANPROSE