Emre Canogullari

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University of Southampton · BEng Electrical & Electronic Engineering (2nd Year)

Profile

Highly motivated second-year BEng Electrical & Electronic Engineering student at the University of Southampton with hands-on experience in PCB design, embedded C/C++ development, and MOSFET-based power electronics. Proven ability to drive practical engineering projects — from chip layout design (L-Edit/S-Edit) to full system implementation (Formula Student steering wheel controls). Seeking summer internship to develop further technical experience and knowledge in the electronics sector.

Education

- University of Southampton — BEng Electrical & Electronic Engineering. Expected graduation: June 2027.
    - Modules include: Advanced Programming, Digital Systems, Electronic Design
    - Developed experience in embedded programming in C/C++ and Python by programming an ATmega microcontroller connected to circuits built from lab instructions through Advanced Programming module
    - Gained the ability to program FPGA's using SystemVerilog through Digital Systems module
    - Succeeded at building a chip layout in L-Edit as a group leader through Electronic Design Module
- Robert College — Graduated 2024. GPA: 91.30/100.

Work Experience

Intern — Plan-S Satellite and Space Technologies, Ankara · 23 June 2025 – 11 July 2025 (15 business days)

- Worked in the circuit design team on MOSFET-based power electronics.
- Designed soft-start, reverse-voltage protection, input-ORing, and DC-DC converter circuits.
- Gained practical experience in power-electronics design and verification through using LTSpice to validate the circuit performances and resolved multiple transient and thermal issues pre-implementation.

Intern — Turkcell · August 2023 – December 2023

- Completed training in Java and web design.
- Developed teamwork skills through working with a team to build a prototype car-rental website.

Projects

Founder — SpaceMyPDF · March 2025 – Present

- Enhanced experience in the use of AI and vibe coding through developing a fully functional web app for annotating PDFs using AI-assisted development (Cursor.ai).
- Guided the design and implementation process through iterative prompting and code refinement (JavaScript, HTML, Firebase).

Automated Button-Pressing Device · Dec 2024 – Feb 2025

- Improved skills in PCB design and programming through designing and assembling a PCB device consisting of an Arduino Nano, an DS3231 timer, and a servo that presses a button at set intervals.

- Programmed the control logic using the Arduino language (based on C/C++).

Engineering Initiatives & Leadership

Southampton University Formula Student Team – Electronics Department · Sept 2025 – Present

- Enhanced skills in PCB design and teamwork skills through designing a PCB for the steering wheel controls as a team: designed the PCB for the steering wheel, implementing a quick-connect mechanism for the cable, and integrating functional control buttons while ensuring a waterproof connection.

Course Representative – Electrical & Electronic Engineering (2nd Year) · Oct 2025 – Present

- Representing student feedback to academic staff and helping implement curriculum and facility improvements.
- Resolved ongoing problems with the course through actively collecting student feedback about the course and communicating it to the corresponding academic staff to find a solution.

Co-President — Career Development Initiative, Robert College · 2022 – 2023

- Demonstrated leadership by organizing and coordinating seminars with kariyer.net and the counselling office.

Skills

Programming: C (intermediate), C++ (intermediate), Java (intermediate–advanced), Python (intermediate)
Hardware: PCB design, soldering, microcontroller and embedded systems (Arduino, ATmega), chip design (L-Edit, S-Edit), basic digital design (SystemVerilog, ModelSim)
Tools & Simulation: KiCAD, LTSpice, MATLAB (basic)
Testing & Prototyping: Circuit debugging, breadboard prototyping, rework tools, oscilloscopes, function generators, and multimeters, logic analisers
Languages: English (fluent), Turkish (native), German (beginner–intermediate)

Certifications

- Great Minds Meet Panel — February 2025
- AP Scholar with Distinction Award – July 2024