

ABDULRAHMAN ALMUTAIRI

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Objective

- Seeking opportunities to apply my growing expertise in embedded systems, PCB design, computer organization, and power electronics. I aim to contribute to teams where I can design, analyze, and build reliable hardware and firmware while continuing to expand my engineering skill set.

Education

University of Colorado at Boulder

Sep. 2022 – May 2026

Bachelor of Electrical and Computer Engineering

Boulder, CO

Relevant Coursework

- | | | | |
|--------------------------|---------------------|-------------------------|-------------------------|
| • Senior Capstone Design | • Circuits | • RTOS | • Software Development |
| • Data Structures | • Microelectronics | • Computer Organization | • PCB Design and Layout |
| • Digital Logic/Systems | • Discrete Math | • Computer Security | |
| | • Embedded Software | | |

Experience

Programmer Internship at Coded

May 2019 – July 2019

Front-End Developer

Kuwait

- Developed and styled front-end components for a client shopping website using HTML/CSS, ensuring a clean and usable design that met customer requirements.

Projects

NASA JPL Mars Hard Lander Electrical System | *Capstone Phase 1*

Dec 2025

- Developed the power subsystem for the Mars hard-lander by building a 3S3P Li-ion battery pack with BMS protection and designing the PCB for the antenna circuit.
- Assembled and welded the custom 3S3P battery pack and validated BMS protection and balancing.
- Contributed to the system power budget, selecting buck converters for the 12 V, 5 V, and 3.3 V rails.

Board 4 – Custom 4-Layer Arduino-Compatible Instrument Droid | *Altium Designer*

Apr 2025

- Designed and built a custom 4-layer Arduino-compatible board capable of measuring Thevenin parameters using a programmable load stage and precision ADC readings.

Super RoboCar – Autonomous Robot Vehicle | *Electronics Design Lab*

May 2024

- Built an Arduino-based autonomous car using ultrasonic sensing and an H-bridge motor driver for real-time obstacle avoidance. Integrated sensor logic and on-board LCD diagnostics.

Prevent-a-Dent | *C++, Arduino*

May 2022

- Built a wireless ultrasonic parking-assist system using NRF24L01 radios to transmit distance data to a seven-segment display mounted inside the garage.

Technical Skills

Languages: Python, C, C++, HTML/CSS, JavaScript, SQL

Developer Tools: STM32CubeIDE, VS Code, Docker, Git

Platforms/Microcontrollers: STM32, Arduino, ATmega328P

PCB Design: Altium Designer, KiCad

Operating Systems: Windows, Linux, MacOS