Karam Zuheir

Mechatronics Engineering Student
Control Systems • Automation • Embedded & Industrial Systems

Professional Summary

Mechatronics engineering student with a strong foundation in control systems, system modeling, and automation. Experienced in MATLAB/Simulink-based control design, embedded systems, and multidisciplinary engineering projects. Seeking a part-time Grid Control Engineer role to apply control theory and simulation skills while expanding practical experience in power systems, SCADA, and grid automation.

Core Skills (ATS Keywords)

- Control Systems Design
- MATLAB / Simulink
- System Modeling & Simulation
- Power Systems Fundamentals
- Grid Control Concepts
- SCADA (Fundamental Knowledge)
- Power Grid Software (Introductory Exposure)
- Automation & Industrial Systems
- Embedded Systems
- Signal Analysis
- Fault Detection Concepts
- Engineering Documentation

Technical Tools

- **Simulation & Control:** MATLAB, Simulink
- **Embedded Systems:** PIC Microcontrollers, ESP32
- **Automation Concepts:** Sensors, Actuators, Industrial Interfacing
- **Mechanical Design:** SolidWorks
- **Protocols (Academic Exposure):** CAN, LIN

Power Systems & Grid Exposure

- Fundamental understanding of **power system operation**, grid stability concepts, and control-oriented analysis
- Introductory exposure to **SCADA architecture**, monitoring concepts, and real-time data acquisition
- Familiarity with **power grid software concepts** such as system modeling, monitoring, and fault analysis (learning-oriented, non-production level)
- Strong interest and ongoing self-study in **grid automation and digital substations**

Professional Experience

Electrical & Mechanical Engineering Intern
Toyota | 3 Months
- Supported electrical and mechanical systems in an industrial automotive environment - Assisted in troubleshooting, maintenance, and system-level analysis of electromechanical components - Gained exposure to industrial workflows, safety standards, and structured engineering processes

Mechatronics Engineering Intern
Hearing Aid Technology Company | 4 Months
- Worked on electromechanical systems used in medical hearing aid devices - Assisted with testing, diagnostics, and integration of electronic and mechanical subsystems - Developed practical understanding of reliability, precision, and quality requirements in medical engineering

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Academic & Project Experience

2-DOF Manipulator Project
- Designed and implemented a **two-degree-of-freedom robotic manipulator** - Developed **control system models** and validated performance using simulation - Created **electrical schematics** for actuators, sensors, and control hardware - Integrated mechanical design, electronics, and control logic into a unified system

Control Systems Projects
- Designed and analyzed controllers using **root locus and Bode diagrams** - Implemented compensators and evaluated system stability and performance in MATLAB/Simulink - Modeled dynamic systems and validated results through simulation

Embedded & Automation Projects
- Developed embedded applications integrating microcontrollers, sensors, and actuators - Worked with hardware interfacing techniques used in industrial and automation environments

Multidisciplinary Engineering Projects
- Combined mechanical design (SolidWorks) with electronics and control logic - Focused on system-level thinking and practical implementation constraints

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Education

BSc in Mechatronics Engineering
Bahçeşehir University, Turkey
Expected Graduation: 2026

Languages

- Arabic: Native
- English: Professional Working Proficiency
- Turkish: A2 level

Availability

- Available for **part-time / working student** engineering roles
- Flexible schedule compatible with academic commitments

Notes for Employers

Motivated engineering student with a strong learning curve and hands-on mindset. Actively expanding skills in grid control, SCADA systems, and power automation tools to align with modern energy and industrial requirements.