# ✅ Case Study: CubeSat Electrical Design using Arduino

## 🗓️ Duration

From: May 10, 2025  
To: May 15, 2025  
(Duration: 6 Days)

## 📥 How the Collaboration Started

The client found my profile on LinkedIn and messaged me asking for help with his university graduation project. He needed support designing the CubeSat’s electrical system, including wiring, Arduino coding, and sensor integration. We discussed details and agreed on WhatsApp, finalizing the cost and timeline.

## 🛠️ Project Details

• Project Type: CubeSat Electrical and Arduino-based System Design  
• Services Provided:  
- Designed complete circuit diagrams (power, sensors, communication modules, and control wiring).  
- Developed Arduino code to handle data collection from multiple sensors (temperature, gyroscope, magnetometer).  
- Integrated communication modules to simulate data downlink.  
- Delivered active TinkerCAD links for simulation and testing.  
- Provided step-by-step guidance for practical assembly.

## 💰 Cost

• Agreed Price: 1500 EGP  
• Payment: Completed via transfer; full amount received.

## 💬 Communication with Client

• Client said:  
"Engineer, the CubeSat system looks solid and the code works perfectly with the sensors. Thank you for making it simple and organized."  
• My reply:  
"Happy to hear everything is working smoothly! If you face anything during testing or assembly, feel free to reach out anytime."

## 📸 Sample Work

• Shared TinkerCAD simulation links for full system testing.  
• Provided well-labeled circuit diagrams.  
• Delivered Arduino code files with clear comments for each function.

## 🏅 Result

• The client successfully built and tested the CubeSat system using the provided materials.  
• Sensors operated reliably, and data communication was stable.  
• Client was highly satisfied with the delivery quality and timing.  
• This project strengthened my experience in aerospace-related embedded systems and sensor integration.