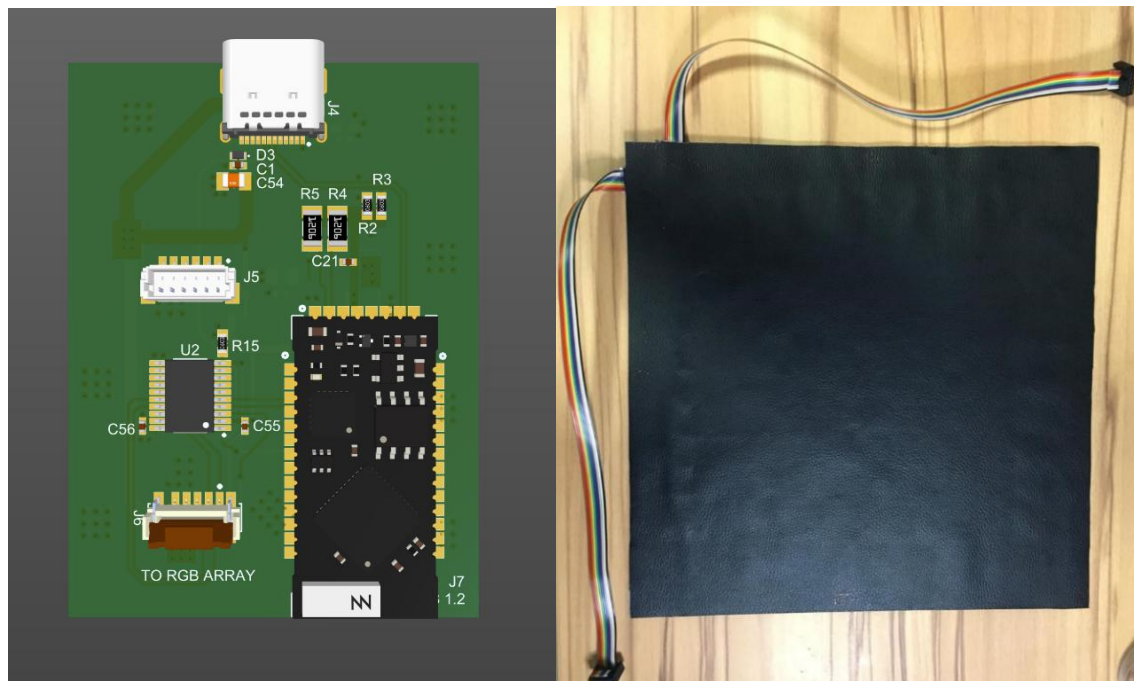


Pressure Measuring Mat for Avionics Seating Startup MVP

The aim of this project for Avionics Seating Startup was to develop a pressure measuring mat and create an interface to acquire data from pressure sensor arrays. Additionally, the goal was to visualize this data in real-time.

- Designed and developed the Pressure Sensor Mat comprising layers of faux leather, copper strips, and Velostat arranged to form a matrix of pressure sensor points.
- Developed firmware to initialize the sensor matrix, read and calibrate data, and transmit it via USB Serial Com and BLE.
- Developed a Windows desktop application to visualize the sensor matrix readings in a heatmap.



Technologies Used:

- STM32F4 development board for hardware implementation.
- C programming language within STM32CubeIDE for firmware development.
- BLE (Bluetooth Low Energy) for wireless communication.
- Python