SW ARCHITECTURE DIAGRAMS

| Threads | **Application Layer** |

| FreeRTOS | **Middleware** |

| | **BSP** - Board Support Package |

| LSM6DSM.h | **Device Drivers** |

| | **HAL** - Hardware Abstraction Layer |

| MCU | **Hardware** | LSM6DSM |

- Performs complementary filter operations
- Streams roll and pitch data to serial oscilloscope

Main_Thread

- Manages all I2C communication
- Samples and streams sensor data to App

I2C_Thread

Threads do not communicate directly

- Central entity of the **star pattern**
- Mediates communications beween threads

App

Other Thread?

Other Thread?

- Modular architecture facilitates adding features