# SmartFin



Temperature
Battery
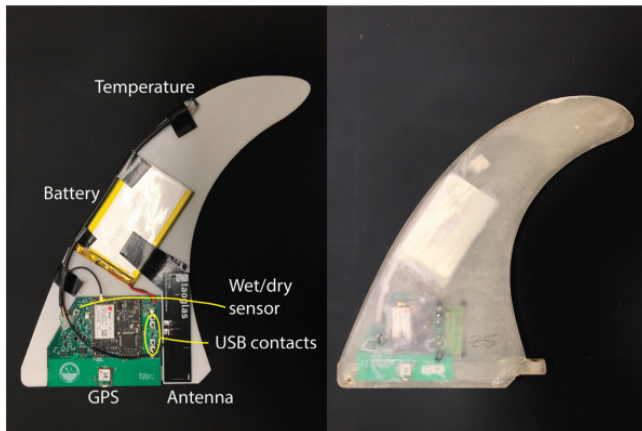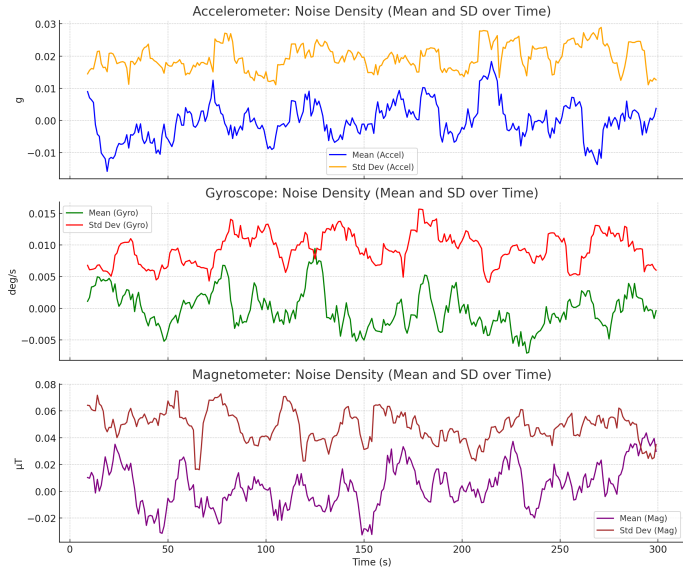Wet/dry sensor
USB contacts
GPS
Antenna

- Validate system with sensors.
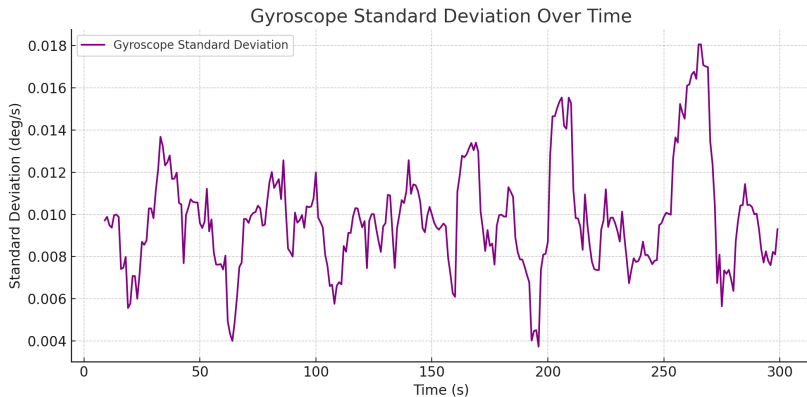- Primary Focus: IMU characterization.

# Key IMU Parameters

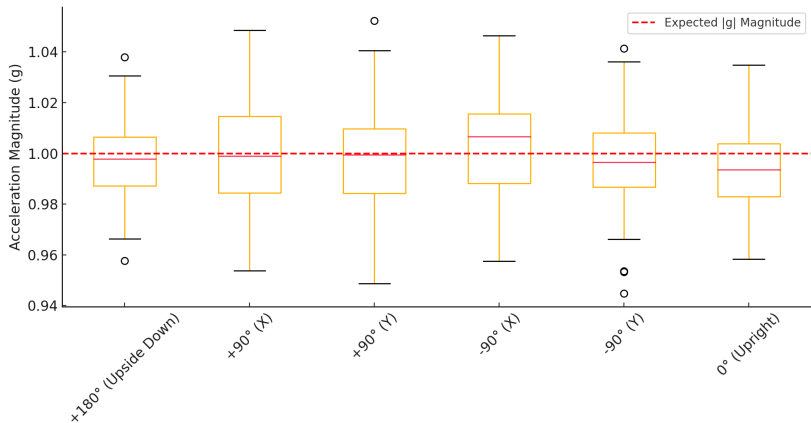| Parameter(s) | Sensor(s) |
|---|---|
| Noise Density, Random Walk | A, G, M |
| IMU Orientation | A, G, M |
| Scale Factor | Gyroscope |

# Expected Charts



Noise/Random Walk (Mean/SD), Random Walk

# Expected Charts



Scale Factor - Gyroscope Temperature Change

# Expected Charts



Orientation: Box Plot (Measured vs Expected)

# Implementation

- Testing on Static Environment
- IMU Orientation