AIRMAN  
Aeronautics  
Airman XB-70 Pro Flight Computer

**Development Workflow.**

For development purposes we will need development boards as below:

1. Development Boards

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| https://www.mouser.com/images/marketingid/2023/img/151516181.png?v=070223.0518 | BHI360 Shuttle Board 3.0  **Included Sensors**   1. BHI360 Smart Sensor 2. BME688 Environmental Sensor (I2C) 3. BMP580 Pressure Sensor (I2C) 4. BMM150 Magnetometer (Aux) 5. BMM350 Magnetometer (Aux) 6. EEPROM |
|  | STM32H747I-DISC1 board features:   1. MIPI-DSI Connector For Display 2. SPI Connection Headers 3. I2C Connect 4. High Speed GPIOs 5. Analog Inputs |
|  | SHT41-AD1F-R2  I2C Breakout Board. |

1. Create the initial stage UI as 2x3 matrix.
2. Gather all sensor data and display on the user interface.
3. Create Multipage UI for the Calculator view and Cockpit View.
4. Calibrate and calculate QFE, QNH, QNE and display.
5. Develop final stage of UI for
   1. GEN NAV Tile – Core Navigation Calculations
   2. RAD NAV Tile – Instrument Flight Rule (IFR) Support
   3. T/O PERF Tile – Takeoff Performance
6. Develop In-Flight Instrumentation (Cockpit Mode) UI and Integration.

Primary Chalanges:

1. Gather all data within 20/30 ms.
2. Make the calibration easier to manage.
3. Attractive and Responsive UI Development.
4. Maintain 20Hz Refresh rate with real time sensor data.